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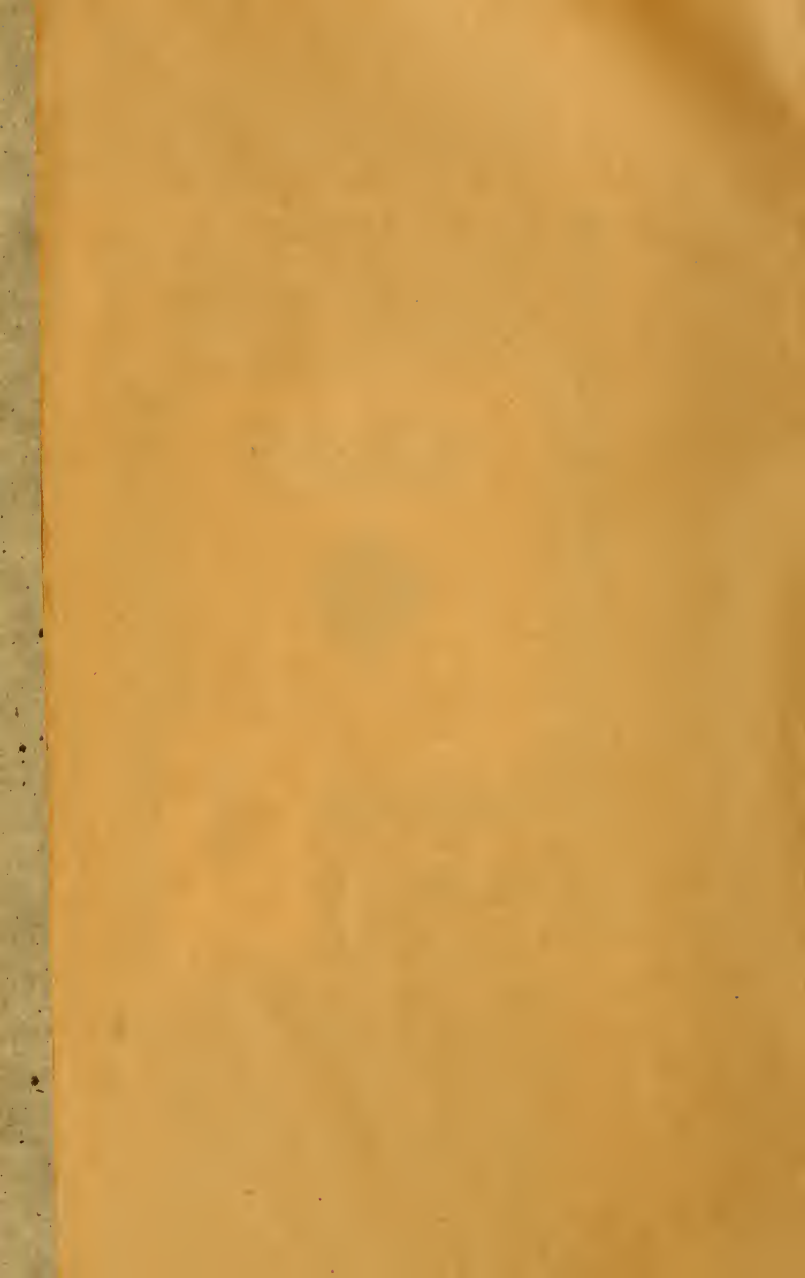


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W. L. Hutchinson, Flint, Mich.

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The Advanced Bee Veil is the most satisfactory veil that I have ever worn. It is not tucked inside the collar, but is fastened and held down firmly, by a cord, out on the shoulders, several inches from the neck, thus making it simply impossible for the bees to sting the neck through the veil, as is the case with the ordinary veil. Price of the veil is 60 cents, but I'll send the Review one year, and the veil, for only \$1.50.

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W. Z. HUTCHINSON,

Flint, Mich.

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Wiring Frames Without Piercing the End-Bars.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, JANUARY 1, 1910.

NO. 1

Nailing and Wiring Frames Without Piercing the End-Bars.

IRA D. BARTLETT.



OF late, the Editor of the Review has been asking me to write some articles for his most worthy Journal. We have been pretty well acquainted ever since I started in bee keeping,

some 14 years ago, and, while I like the energy and push that he displays in his work, I am somewhat reluctant about writing. Not because I am unwilling to contribute my share to the worthy cause, for without the free giving spirit of many other writers I would not be in possession of the knowledge I now have concerning the vocation which I have selected as my life work, but because I have never felt I had the time to devote to writing, and, further, that I was not sure that I could state what I wanted to in a pleasing and yet pointed way as is desirous in this stage of the world when every one is in a hurry and wants

to get at facts without having to spend too much time in their research.

When I start to read an article, it makes it thrice interesting if I only know something about the author; hence, taking it for granted that others feel somewhat similarly, I will give a brief account of myself, and then proceed to tell you how I nail and wire brood frames.

I was born in Leelanau Co., Michigan, May 2nd, 1877. My father is of English-Irish descent, while my mother is of German. My parents came to East Jordan, then known as Pine Lake, when I was about four years of age; and, while they have recently left for the State of Washington, I shall content myself, at least for a while, in the village of my boyhood days.

In the summer of 1895 it occurred to me that I would like to become an apiarist. I do not know *what* ever started the notion, but I wanted a hive of bees; so, after trying in vain to induce some neighbor bee-keeper to sell me a colony, I finally made arrangements with Mr. L. M. Severance, then a bee keeper having some 50 colonies, to deliver me

Jan. 16, 1946

the first nice prime swarm, for which I paid \$5.00 in work on his farm. Increased to two the first season; to seven the next; and with the increase and what I have purchased the past 14 years, I now am in possession of 375 colonies.

I will state here that the bees have been my main support while I have been increasing my numbers. With returns from them I have cleared up a farm of 20 acres, just out of town, built fairly good buildings, and have some \$3,000 worth of bees and supplies on hand. Have been married the past three years—have two children.

I am telling you the above to show that, with proper care and management, the busy bees will bring you remunerative returns for their keep.

I will also state here that it is more to help the novice than the expert that I would write. It is often hard to change the ways of the staid old bee keeper. 'Tis just as well, perhaps, but let the young man that enters the field investigate the different methods and devices. Let him be sharp-shod all the while, and he will not slip because of his inability to master some little apparent vexatious problem that may, and always will, come up.

NAILING AND WIRING BROOD FRAMES.

You will note by the frontispiece that I use the self-spacing, Hoffman style of frames. These frames are made by myself at a factory here in town. Being familiar with the workings of the machines, the management rents me the use of the machines that I may wish to use in making the frames.

To start with, in nailing, I lay a 16-ft. x 2x9-inch plank on good solid foundation at the proper height for nailing. I then nail four strips 1 x 1½ inches x 16 feet long, to the top side of the plank. One strip is nailed flush with the back edge, another flush with the front edge, and the other two so that an inch-space is left between all the strips. These strips should be of even thickness, as the end-bars to the frames are laid

crosswise of the strips, and the spaces between the strips are so that the nails which are to be driven through the end-bars, later to be bent into hooks to thread the wire on, may not penetrate the plank.

I now nail another thin strip to the edge of the strip farthest from me, so that it sticks up 3-16 of an inch. This is used as a "bumper" to crowd the end-bars up against in filling up the plank. To fill the plank with end-bars, I start in at the left end of the plank, first nailing one end-bar fast, solid, then filling up the plank; which, if self-spacing frames are used, will hold 135 pieces. I crowd them together tight, and drive a two-penny nail in the last bar to hold them in place. If the end-bars sag down in the middle, tack a two-penny nail in at intervals to hold them in place.

Now take a straight-edge and lay across the bars, over the space between the strips, and mark along the full length of the plank. This will require three marks in all, there being three spaces and three nails required in each end-bar to bend for threading the wire. Let me say here that should you desire the wire to be closer the top or bottom, that you can regulate that to suit yourself by using a narrower strip at top and bottom. In this case it will leave the wires two inches from top- and bottom-bars, if you drive the nails in the center of the space, less the thickness of bottom-bar, and the distance you rabbit out in the end-bars. I think the illustration will make it plain to you, so that you will have no trouble in figuring it out, should you desire to try this method of nailing for wiring.

I am now ready to nail. First, I distribute two-penny fine nails along on top of the end-bars, and start in at the right side to nail. I drive a nail on each mark made on each bar, and am careful to drive them in the center of the end-bar and drive them *straight*, so that when they pass through the bar they will be in the center of the underside ready to be bent when the proper time comes.

After driving these wiring nails through,

I then tack, or start, the nails in the top and bottom ends of the bars that are to be driven through into bottom- and top-bars thus forming the complete frame. In doing this, I start at the right side, and nail two nails in the top of each end-bar. As I use a top-bar 1 1-16 inches wide, I nail, as near as possible, $\frac{3}{8}$ -16 of an inch from the edge. This will leave about $\frac{3}{8}$ of an inch between the nails and be far enough from the edge of top-bar to avoid striking through if there is care taken to start the nails straight. I also slant the nails towards the top, just a little.

I now tack two nails in the bottom end of each end-bar, putting them pretty close together, so that, in nailing up the frames, both nails may be driven in with one blow of the hammer. I use three-penny fine for the nails driven into top-bar, and two-penny fine, same as used for the purpose of wiring, for the bottom bar.

After the nails are all in, I loosen up the bars, and take a pair of small pliers and bend the nails that are to form hooks for wiring. I grasp the end-bar in the left hand, top side up, and turn the nails into hook-shape, towards the bottom of the bar. You would be surprised to see how rapidly this can be done after a little practice.

Unless you have several thousand frames to nail up, you would better complete each job as you go along. It will save you time. After getting already for putting the frames together, I use a form or jig, for placing the parts in to nail. It will hardly be necessary to describe this, as you will likely be able to make up a form suitable to nail by. However, I will say that the top-bar sets into a slot in a piece of plank, and that the end-bar, when placed for nailing, fits so as to be in place. There is another plank, or board, that is at the side to shove the end-bar against, which keeps it square.

The nails are first driven in the top-bar, then the bottom bar put in place, when one strike of the hammer drives in the two nails, then the frame is reversed and the other end-bar is nailed on.

The nailing of the frames is done in a remarkably short time. I can nail from three to four per minute, after they are ready with the nails started in the end-bars.

Now comes the wiring: Here is where this plan saves time over the pierced end-bars. It takes a little longer to get these frames ready, but with the style of form that I use for wiring (shown in the frontispiece) I can easily wire three frames per minute. Here is the way I do it: I have the form nailed fast to my work bench, with the lower end even with the edge of the bench nearest to me. I then pile up a lot of frames at my left. In working I grasp a frame in my left hand, slip it into staples such as you see in the upper left and right corners of the photograph, then slip my hand down to the lower corners and turn the two bent irons which you see, so as to hold the frame solid. These two bent irons are simply two common bolts with the heads cut off, and the burrs screwed on at the bottom so that one can regulate the height at which they should be for any particular frame. When the frame is fastened in place, I grasp the wire on the spool seen above the frame and bring it around the bent nail on the lower left hand corner, give it two turns with the thumb and fore finger of left hand, run across to the opposite nail, then across *diagonally* to the center nail, then back across to the upper right hand nail, then straight across to the lower right corner, then to the upper center nail, and lastly back to the starting point, where it is caught over the nail and cut with pliers. Now give the wire a twist four times around, turning both wires at the same time, and it is fastened securely.

To get the wire taut before finishing the threading, I catch the wires with my right fingers and tighten them up. This is done with no lost time, and so quickly that one watching will hardly detect one doing it.

Of course, I do not expect you will do this work as quickly at first as I do, as it

requires time to learn anything so you can do it expeditiously.

I have always made my own hives, complete, and have always used the bent nails for wiring. I would use them if I bought my frames, for the wire is always *taut*, which, contrary to the ideas of some bee keepers, I would have no other way. This form of wiring gives a nice straight comb.

I formerly used light brood foundation

in these frames, but, of late, especially for extracting, I have used medium brood. However, either is very satisfactory.

It may seem to some that for only a few hives of bees it would not pay to go to the trouble to make forms for nailing and wiring frames, but let me say that you will change your mind quickly if you will try it once.

EAST JORDAN, Mich., Dec. 7, 1909.



Triumphing Over Obstacles in "Keeping More Bees."

MATHILDE CANDLER.



DEAR Mr. Editor:—I regret that I am a little late in preparing the sketch of my beginning in bee keeping, which you requested. I have been so very busy getting my

bees moved to a better location that I've hardly had time for anything else. "How did you ever come to take up bee keeping as a business?" is a question I am often asked. It seems to surprise some people to find a woman who is a bee keeper, although I do not know why. Woman is taking a more or less active part in all the world's work, and I cannot see why she may not become interested in bees, or anything else, for that matter, in which human beings may be interested. It somewhat surprises me that it *surprises* them.

Before I had bees I was a school-marm, teaching a country, district school. One day I saw an advertisement in an agricultural paper, of the A B C of Bee Culture. Having always had a liking for the objects of Nature—birds and

bees and bugs and beetles and flowers and trees, of which I used to gather specimens to examine with a microscope—I became interested and resolved to send for the book. Reading it brought on the worst kind of a bee-fever, not only the *wonders* of bee keeping, of which I read there, but also the greater *independence* which I thought I could secure, attracted me; and in the spring of 1890 I bought two colonies of bees in box hives.

Now began my troubles. O, those first lessons in bee keeping! Stings! I wonder if any other beginner was stung any worse or any more than I was that first season. I waded right into it and I was a sight. I actually *cried* with the pain. I even wished that I had never seen those horrid bees, and that something might happen to rid me of them forever; although I never would have confessed myself defeated, to any one.

But nothing happened, and after a time I learned better how to handle them. I bought me some rubber gloves, made me a good bee veil, and learned to keep my smoker from going out. My enthusiasm returned. I subscribed for a bee journal, and read eagerly the articles from the pens of old and experienced bee keepers. Do not all beginners read those first? Does not every enthusiastic

beginner (and what one is not enthusiastic) expect to become one of these experts some time, and does he care very much for reading beginner's reports? I also bought several other bee books, and, later, subscribed for all of the bee papers. I would have been the loser had I not done so, for I think I have learned something from each one more than enough to pay the subscription price during my whole bee keeping life. One bee paper alone by no means contains nearly all there is to tell of bee keeping experience and information. A beginner should read them *all*—and I am yet a beginner.

I made a visit to a neighboring bee keeper where I saw my first patent hive, and secured a sample, after which all my earlier hives were made. I also visited Mr. France, at Platteville, and saw how they handled the bees there. It was a revelation to me and a most valuable lesson. Actual demonstration is way ahead of any written description or instruction in a bee book. A beginner can do nothing more profitable than to visit some nearby brother in bee keeping.

I worked with bees in the summer, and attended an Art Institute in Chicago in winter; having given up teaching as soon as I had bees enough to give a little revenue. I kept only between 60 and 70 colonies and thought that was about all my locality could profitably maintain. Now I have about three times that number in the same locality, and do not think it is overstocked, and it is only an average one; but the management is different.

Financial losses and difficulties finally compelled me to give up my art studies. About this time there appeared the editorial in the Bee Keepers' Review urging the keeping of "more bees." I resolved to do so in the hope of recovering what I had lost, and increased to about 100 colonies. The following spring I commenced an out-apiary about eight miles from home. I started it with only 18 colonies. That was a mistake. I should have taken half the colonies in the yard.

I had no money with which to buy hives and fixtures but I had a lot of discarded hive-bodies, and I resolved to use these in my out-yard. That was another mistake. I should have used them in the home-yard where I could better watch them and give the attention that old and worn out hives sometimes demand.

I had an opportunity to buy some cheap lumber, on credit, and had some nice bee sheds put up, three in number, 6 x 16 feet. Having neither covers nor bottom boards, I put the bees in these sheds, or house apiaries, and increased until they were full, and the rest I put outside.

It is uphill work building up an apiary without covers or bottom boards. I used dirt bottom boards, sawdust bottom boards, and wood, and, for covers, many hives were just covered with paper and any boards I could find to use, weighted down with stones so the wind could not blow them off. Colonies do not become very strong under those conditions. And in the fall I had a lot of weak colonies to unite; and in the spring a lot of dead, or very weak, ones; caused by mice getting into the hives. But every year I made some advance, until now my colonies are in pretty fair shape, and I have increased both yards until I have about 300 colonies.

I used to do nearly all the work alone, and did much for which I was neither fitted nor strong enough. Then I got a neighbor boy to help me during part of the school vacation. Now I employ help whenever I need it, provided I can get it. Help is always hard to get; especially help in a bee yard, and I often have to do everything alone, and work from daylight until dark. Lifting is the hardest part of bee work for a woman, and I think I've done my share of it.

I keep no horse but go to the out-apiary by train, as it is near the railroad station. Board is cheap and I remain until the work is finished, doing only what seems most necessary at the time. Of course, with so many bees, and often insufficient

or no help, I cannot hope to have things as they ought to be, or as I would like to have them. I just do as well as I can, and let it go at that.

I didn't expect that this was going to be such a long letter when I started, and am sorry if I have taken up too much of

your time with an account which brings up a flood of memories that are vital to me, but may not interest an outsider. I thank you for the kindly interest you have shown me.

CASSVILLE, Wis., Nov. 6, 1909.



Some Conditions that must be Considered if Separators are not Used.

ADRIAN GETAZ.



IN the September Review, Mr. Morrison asserts a good many things that, as the editor says, may be considered as heresy; at least by some bee keepers. I wish to say, right at the beginning, that I

have no doubt that Mr. Morrison has obtained all the results he claims; but I wish to add, emphatically, that the bee keeper who might think that *he* can obtain the same results, stands a splendid chance of being woefully disappointed.

Mr. Morrison says that separators can be dispensed with when three conditions are fulfilled: Hives perfectly level; narrow sections; and full sheets of foundation. Perhaps I should say here that nearly all the honey I have produced has been obtained without separators. I did use common separators to some extent at the beginning, and, lately, I have used to a slight extent the fences and plain sections. I sell all my honey in the local market so that an absolute regularity is not necessary. I will add that, without separators, the four bee-way sections are the best. They give more regular combs than the two-way sections. I do not find that the thickness

of the combs, or width of sections, makes a very great difference, but it makes *some*.

SOME ESSENTIAL CONDITIONS.

The essential conditions to obtain the results claimed by Mr. Morrison are, besides those he mentions, a heavy flow, a strong colony, and warm weather. When these conditions exist, the bees will work equally well in all parts of the super and all the sections will advance *simultaneously*; but let *one* or more of these conditions *fail* and you will have another tale to tell. If the weather is cool, the bees will huddle together in the center of the super, and the outside sections that they occupy will bulge into the unoccupied ones. If the flow is light, only a part of the sections are occupied, and a similar defect takes place. If the flow is light and intermittent, some sections will be partly or completely capped before being completed.

Mr. Morrison says that the natural thickness of a comb is only one inch. Like Dr. Miller, all I can say is: "I don't know." I think the demolishing of a few box-hives will show any one that the bees are far from confining themselves to a single thickness of comb.

BEES WILL STORE MORE HONEY WITHOUT SEPARATORS, AND STILL MORE IN FRAMES.

The bees will store some more honey when no separators are used; and still

more if frames instead of sections are used; a la the chunk honey apiarists in Texas. The difference, however, is not so great (as far as I know) as some people say; provided, however, that the bees are properly managed and induced to go into the sections.

A good deal depends upon the nature of the flow. Let a heavy flow come on suddenly, during warm weather, and the bees will almost rush into the supers, separators or no separators, full sheets or only starters; there is but little difference. But it is seldom that way in this locality; the reverse is the usual rule.

MORE HONEY CAN BE SECURED IN THE EXTRACTED FORM.

No separators, says Mr. Morrison, gives us no more swarming, and as much surplus as is the case when working for extracted honey. My first impulse was to deny flatly this assertion. My second thought was that it might depend altogether upon how the extracted honey was obtained; and that when comparing a badly managed extracted honey apiary with a well managed comb honey apiary, the results might even be in favor of the latter. But if both are well attended too, I claim that the extracted honey apiary must be considerably ahead of the other. The reason is not far to seek. In the extracted honey apiary the bees have nothing to do except to gather the nectar and store it. I mean so far as surplus honey is concerned. In the other, they have to build the combs; that means honey consumed for that purpose, and a considerable amount of time to secrete the wax and build the combs. Add to this, that the swarming fever can be controlled when working for extracted honey, but not when working for comb, and it is easy to see that one and one-half, or twice, as much honey can or rather *could* be obtained when working for extracted than when working for comb honey. The Dadants say that in their apiaries only four or five per cent. of their colonies swarm, and that occurs when sup-

erseding their queens. This means that if the apiarist were doing the superseding himself, hardly any swarming would ever take place. Some European apiarists, working on the same system, have not had any swarms, for several years in succession.

MODERN AMERICAN METHODS NOT THE BEST.

I know I am going to be considered a rank heretic, or lunatic, or something of that sort, but I will say it all the same, our modern American methods of working for extracted honey is radically wrong. We begin in the spring with too small a hive, and, as a general rule, too small a colony; then later, add another story and make it too big. Then, when the flow comes, we take off the added story, put the combs full of brood and honey in the other, and confine the queen there with almost no room to lay her eggs. Then the bees begin to loaf and prepare for swarming. We cut that short by shaking. The colony is then weakened by the amount of bees and hatching brood taken to the new stand. Furthermore, it has to rebuild its brood nest, combs, brood and all; and that at the height of the flow, when all their energy and work should be spent in filling the supers. Why not do like the Dadants? Even if there were no more honey secured there would be lots of work saved and we could "keep more bees."

Mr. Morrison says that if a colony appears at the point of swarming, the addition of a super without separators will prevent them from swarming; that is, they will work in it instead of swarming. But if the bees are in condition to take possession of the super, it should have been on *already*. The giving of a super will *sometimes* prevent swarming, if the queen cells are just started, but not *always*, by any means, and not at all if they are in a more advanced stage. I have tried it often enough to know it, and with supers without separators at that.

KNOXVILLE, Tenn., Nov. 29, 1909.

The Merits, Production and Sale of "Chunk Honey."

J. J. WILDER.



THE production of chunk honey does not mean going back to the old way of producing comb honey, but it does mean nearer Nature's way; and is the easiest, simplest and most eco-

nomical way in which comb honey can be produced. It is a combination of both comb and extracted honey production, and is most satisfactory to the producer, dealer and consumer.

Almost all families who are fond of honey differ in taste; some like strained honey and others like it in the comb; in fact, nearly all like a change. If the honey is mixed in the packing, the comb of one flavor and the extracted of another, it wards off that tired-out taste; and, in a majority of cases; there will never be any "tire out."

If comb honey which granulates quickly is packed up in extracted honey which is less inclined to candy, or will not granulate at all, it will greatly prolong granulation.

Space does not permit me to bring out many advantages that chunk honey production has over either section or extracted production, but I will briefly outline some of the work necessary in chunk honey production, and the reader can see its disadvantages and advantages; if it is done, either on a small scale or extensively.

First permit me to say that I am writing from years of experience in all the different ways of producing honey. Also there were times when my business has been in the "rut," and I only

realized a scant living from it. I have had my "ups" and "downs," and I feel free to relate what I am now doing. Also, it will be seen that location has nothing to do with this subject. Neither has the market; for it is a well-known fact that the honey market in the southeast is far more delicate than any place in the United States.

In early spring, at the beginning of the honey flow, all colonies that are expected to store honey are elevated from the bottom boards $1\frac{1}{2}$ inches, by means of two strips of wood under the sides of the hives, leaving an opening at the front and back of the hives, thus allowing a current of air to pass under the frames. The opening at the rear, however, is only half as deep as the one in the front. The object of this is to discourage swarming and loafing, prevent the melting down of combs, drying the interior of the hives, securing greater progress in the supers, a thicker and better article of honey and more beautiful appearance.

Shallow extracting frames and supers are used. One or two of these are left on each colony over winter, and more are added during the season as they are needed. As soon as the bees begin gathering honey, we see to it that the bottom super contains three combs, one on either side and one in the center; if we have them, even more combs are placed in these bottom supers. If we have not any combs, then new frames containing full sheets of foundation are placed in these supers. The object is to get the bees into these bottom supers as early as possible.

The old frames, which contain only about one inch of comb next to the top-bar, are mostly placed in the second super with one or two ready-built combs in the center, or else a few new frames containing full sheets of foundation.

As soon as work is in progress in the second super, the bottom one is raised and the top one inserted next to the brood nest. If there are four or five combs in the bottom super containing eggs and brood, they are not removed, but left in as a portion of the brood nest. If it contains as much as two or three combs of eggs and brood it is removed and these combs inserted in the center of the super which is placed next to the brood nest. At no time are the bottom supers raised and one containing frames with only starters placed next to the brood nest; as that would greatly hinder progress.

During this operation we look carefully for queen cells, and if any are found in colonies where we do not desire to make increase they are destroyed; but, if we find cells in very populous colonies where we desire to make increase, we move such a colony to one side about seven inches, and set a hive, the frames of which contain full sheets of foundation, down close beside it on the same side that the old hive was moved from; so that both entrances are level and as near alike as possible. Seven inches from each entrance will be the spot where the old one was.

Now, all the combs and bees are divided up, as nearly equal as possible, between these two hives; and between each alternate comb is hung a full sheet of foundation, and a super put upon each hive.

During these operations, if there are any combs of honey ready to be removed they are placed in a super and loaded on the wagon, and empty frames inserted.

Every yard is visited every five days, and the honey removed as fast as possible, and brought to the packing house.

No queen excluders are used. If a few combs are soiled by the queen occupying them, they are used for extracting combs; as one-third or more of the honey crop must be extracted.

The vessels that we have found best for chunk honey are pint and quart

Mason fruit jars, two- and three-pound cans, and five- and ten-pound pails, with large friction top. Vessels larger than these are not so satisfactory; as consumers will very often tear up and mix up the comb, fishing through it with a fork or large spoon, hunting for larger pieces of comb, or even removing it for the table, to such extent that it is less wholesome.

The honey is cut out of the shallow frames, leaving about one inch of comb and honey next to the top bars. Then it is cut and placed closely in the vessels. For the pails it is cut just large enough to fit flat, and placed one piece upon another until the pail is nearly full, when extracted honey is poured in over the the comb until the pail is well-filled when it is sealed.

For the cans and jars the honey is cut just long enough to fit in end wise, and cut in strips from one to two inches wide, and these closely placed in the vessels which are then filled with extracted honey. Jars should be filled with light colored honey, the darker grades being used in the pails.

For shipment, the jars are packed back in the crates in which they were received, and well corded with binder's twine around the sides and ends. The product is then ready for market. The cans and pails are packed securely in quantities to suit the demand.

All vessels containing honey are nicely and neatly labeled, wording to suit the producer. As I have never seen anything just like it, I will give the wording I commonly use: "From the apiaries of Joseph J. Wilder, Cordelle, Ga., Warranted pure honey. Gathered by honey bees from the honey plants of South Georgia. Keep out of refrigerators."

ITS MARKET.

Chunk honey is the most wholesome comb honey that is put on the market. It is free from insects or foreign matter, and will keep much longer and retain its flavor better than extracted honey. Also,

it can be exhibited more attractively in show windows or other places of exhibition. Therefore, chunk honey would fill a demand which cannot otherwise be filled.

The common public does not look upon it with as much suspicion as the manufactured article. It is the "old style honey," such as mother and father or grandfather or grandmother used to put up. Country people buy it from one season to another, and they will not, to any extent, when otherwise put up. Large cities are supplied with section and extracted honey, and if we produce much more honey we are dependent on the country trade, and this is the only channel through which we can reach it as well.

I am getting into the future of my subject too soon, but I wish to bring out these points here, and state that this is already occurring in some sections of the South.

Any regular section honey dealer or customer will take chunk honey on trial, and this is all that is necessary. It wholesales from two to six cents a pound more than extracted honey; and

nets the producer about as much as section honey, while the demand is greater.

ITS FUTURE.

I will say without fear of contradiction that chunk honey production has a great future. It has been largely instrumental in making Texas the greatest bee and honey country; and other States are sure to fall into line.

There is already much enthusiasm aroused among the bee keepers on the subject, especially those producing comb honey, and as soon as the bee supply manufacturers put out a chunk honey hive and give its merits, and the proper information on the production of chunk honey, I believe that bee keeping will take a rise such as it never has at any time previous. The misty, knotty, tedious, lengthy, puzzling, and expensive conglomeration of hives and methods in comb honey production which are now hanging like a weight on the progress of our industry will be at an end; and we will have a clean-cut proposition again.

CORDELE, Ga., Oct. 25, 1909.



Advantages of Sectional Brood Chambers in Comb Honey Production.

LEO E. GATELY

IN endeavoring to determine which was best adapted to the exclusive production of comb honey I devoted a number of years to experimenting with and testing the merits and demerits of the various styles and depths of hives.

In this and perhaps in the majority of localities, contraction of the brood nest is a necessary essential to insuring satisfactory work in the surplus boxes; and in this respect all brood chambers consisting of a single tier of deep frames are enormously deficient. Any method of contraction involving the replacing of a

part of the frames with dummies, invariably results in imperfect filling of the outer sections, and increases the difficulty in getting them completed simultaneously with those more centrally located. Obviously, the only logical and practical method is to contract from the *top* instead of the *side*, without reducing the supering surface of the brood nest. By simply removing one of the divisions, a hive in which the brood chamber is horizontally divisible may be reduced to about the proper capacity; and the shallowness of the remaining division immediately throws the whole working

force of bees into the surplus receptacle. Especially desirable is this prompt start in super-work when no separators are used; as an even and simultaneous beginning upon the entire super of sections is the chief secret of avoiding bulged and uneven combs.

Notwithstanding all of the adverse criticism of the sectional hive, it is absolutely unequalled in flexibility and economy of management. As this hive is a radical departure from the principles contained in deep, single-chamber hives,

the methods employed to insure successful results must be entirely different.

The depth and shape of the divisions, as well as the locality, may possibly, to some extent, influence the production of brood; however, sectional hives are in this locality positively and emphatically unequalled in this respect; and I wish to go on record as urgently recommending their adoption wherever the object in view may be the greatest quantity of fancy honey.

FT. SMITH, Ark., Nov. 7, 1909.



Why Chunk Honey does not Meet With Favor in the North.

M. P. GADY.

SOME half-dozen years ago, when the production of "bulk" or "chunk" honey was quite extensively advocated by some of the writers for the bee papers, I was much taken with the idea, and gave it a trial on an extensive scale. To put up comb honey in tin packages, thereby getting the benefit of low freight rates on shipments, at the same time doing away with all danger of damage during shipment, seemed certainly a very sensible thing to do.

A good quantity of extra fine honey was put up in five- and ten-pound pails. The pails were well filled with fully ripened raspberry and clover comb honey, with enough strictly fancy extracted honey of the same kind added to fill up the chinks.

In order to thoroughly test the desirability of the "chunk" honey, and at the same time to develop a market for the new product, a good salesman was employed to solicit orders direct from the consumers. A fine sample in a flint glass pail was used in securing orders. The salesman explained the superior money value of the chunk honey, and, being a silver-tongued hustler, he made sales

very readily at 12½ cents per pound. At the same time selling, to those who preferred, extracted honey at 10 cents per pound, and section honey at 15 cents; however, most of the sales were "chunk" honey.

While the immediate results were very satisfactory, the final results were disappointing. An occasional patron was pleased with the chunk honey, but more than nine-tenths of the purchasers were emphatic in expressing their preference for *either* extracted or section honey; and finding it impossible to make sales of the chunk honey, I was obliged to discontinue its production.

On the part of the consumers there were three principal objections to chunk honey:

1. Its mussy condition (being much more so than either straight extracted or comb honey.)

2. The flavor of the bulk comb honey was not equal to that of section honey (presumably due to the coating of extracted honey, as in many cases the comb honey in the chunk honey packages was cut directly from sections that were nearly filled.)

3. Candying of the extracted honey in the chunk honey packages spoiled the comb honey for table use. An effort to liquefy the candied honey melted the combs, and the resulting mixture of honey and beeswax was rather a disgusting mess to the purchaser who had listened to the salesman's honeyed words in praise of his "Pails of fancy comb-honey, chinked with the finest comb-free honey;" for, when the smiling salesman again took the field, the sentiment in regard to *chunk* honey was:

"Throw physic (chunk honey) to the dogs; I'll none of it."

It may be said by the chunk honey advocates that the foregoing objections are not good—but they were good enough to cause my customers to call for either comb or extracted honey in almost every instance—much to my regret and financial loss; as I had procured a special outfit for the production of comb honey.

This question, like many others in apicultural practice, seems to be, in a large degree, one of locality. Our Southern

brethren have a class of consumers who are apparently satisfied with chunk honey. That such is the case is very fortunate for the bee keepers of the Northern States, as it removes from the possibility of competition with our product immense quantities of Southern honey. Let us hope that the local demand will be greatly increased.

Whatever may be the demand for other grades of honey, the producer of fancy comb honey from the clover, the raspberry, or the basswood, will always find a market for his crop at prices, which, under judicious methods of production and marketing, will give a good return for the capital and labor invested. The fancy one-pound section appeals to the eye, the palate and the pocket-book more potently than any other form of package yet devised; and it is to the interest of the producer to preserve in every possible way the beauty and delicacy of his product.

BIRNAMWOOD, Wis., Nov. 26, 1909.



EDITORIAL

No Other man's experience is as good for you as your own. Some one else can only point the way. You must travel it yourself to really know.

Dreamers have built the world, conquered the sea, air and desert, and planned civilization—is it undesirable to be included among their number?

The Review never had more subscribers, or was more prosperous, than at present. The prospects were never better for it to 'make good,' and do good.

Venison, buckwheat cakes and coffee made up an ideal bill of fare at breakfast when I enjoyed a visit recently at the home of Mr. E. D. Townsend.

Gus Dittmer, of Augusta, Wisconsin, having bought one of Dr. Jones' little books on the prevention of swarming, writes me as follows: "I would not let it go for a \$1.00 a page, if I could not get another. I believe that the doctor has hit it, and I shall give it a trial another season. I believe it is great. I have confidence in it."

The price of the book is only 25 cts., or I will send the Review one year, and the book, for only \$1.20.

Condition of Colony and Arrangement of
Hive in Cellar Wintering.

In my comments in the Extracted Department, on cellar wintering, there is

one point that I overlooked, viz., the condition of the colonies and the arrangement of the hives. A populous colony of young bees, with a good, thick quilt or cushion, over the frames, (no cover) can warm and dry the inside of the hive, expelling the moisture, and making themselves comfortable, when a weak colony would suffer from cold and dampness. The strong colony may be compared to the sturdy horse or ox, the weak colony to the calf or lamb.



Comb Building in the Open Air.

A swarm of bees is not always able to find a hollow tree, or other suitable cavity, in which to make its home, and, as the bees hang on a limb awaiting events, they begin building comb, and the result is that the colony becomes established in the open air. Mr. A. H. Guernsey, of Ionia, Michigan, found such a colony last fall when hunting bees. It was on a limb 40 feet from the ground, and occupied over two feet of the limb; some of the combs being over a foot in diameter. He climbed the tree, wrapped a sheet around the colony, sawed off the

limb, and lowered it to the ground. He then took the novel exhibit to a gallery and had it photographed, with the results as herewith shown. The bees are now in winter quarters—in the cellar I should presume.

Election of officers for the National resulted as follows: President, Geo. W. York, Chicago, Ills.; Vice President, W. D. Wright, Altamont, N. Y.; Secretary, Louis Scholl, New Braunfels, Texas; General Manager, N. E. France, Platteville, Wisconsin; three Directors, J. E. Crane, Middlebury, Vt.; E. F. Atwater, Meridian, Idaho; and R. A. Morgan, Vermillion, So. Dak. More new men elected at this election than have been in a long time. Let us remember the old adage that it is the "new broom that sweeps clean."

Frank Coverdale, of Iowa, in renewing his subscription to the Review, writes as follows: "I like the Review because it holds forth large hopes for the keeper of bees; helping many who are groping along in a half hearted way; setting them up on a higher plane; and furnishing knowledge which leads onward towards more income; which is the vital essential towards which all must look. I have again, despite the very poor season, secured a big plenty of comb honey to keep the wolf from my door—all by 'keeping more bees,' and fussing less."

Michigan State Bee Keepers' Association will hold its annual convention in the parlors of the Hotel Wentworth, corner of East Michigan and Grand Avenue, Lansing, Michigan, February 23rd and 24th, next. A good program is in course of preparation; and liberal premiums will be given for best honey and beeswax.

The Association annual booklet sells members' honey at an advance over market price. This is no experiment.

Six seasons have demonstrated this fact beyond a doubt.

No Michigan bee keeper can afford to stay out of the Association, even from a financial viewpoint.

You are especially invited.

L. A. ASPINWALL, President.

E. B. TYRRELL, Secretary,
230 Woodland Ave., Detroit, Mich.

Changes in Bee-Keeping.

There is scarcely any business that remains unchanged year after year. Conditions change, and the business changes accordingly. Bee keeping is no exception. We all know that, years ago, bee keeping consisted in the farmer keeping a few colonies in log "gums" or box hives, brimstoning the heaviest and lightest each fall.

Then came the movable comb hive, and a new era was opened, but the making of a business, or even a specialty, of bee keeping had not been thought of. The keeping of bees proved so profitable, that, gradually, men began turning their whole time to the business.

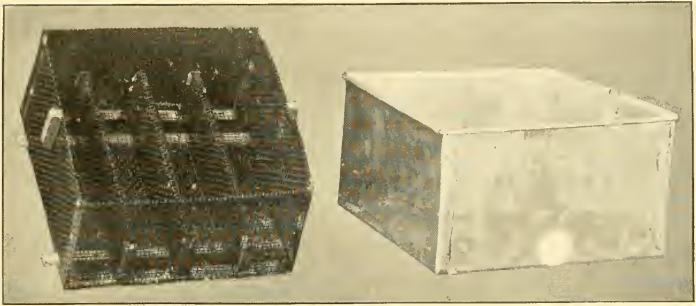
Comb honey was, of course, the only product of the apiary; then came the honey extractor, introducing a new element, and bringing about another change. The extracting of unripe honey greatly injured the market for this product, and as manufacturers had not yet learned to use it, extracted honey became a drug in the market. Bee keepers learned their lesson however, learned that the honey must be ripened before it was extracted, and, of equal importance, manufacturers, bakers, etc., began to use extracted honey in large quantities. The result was that comb honey production was largely abandoned for extracted honey. Many men began "keeping more bees," spreading out and establishing out-apiaries, and extracted honey production was peculiarly fitted for this kind of bee keeping. The increased demand for extracted honey, and the ease with which it can be produced in large quantities in out-apiaries, has greatly

stimulated this branch of the industry, until it might now be said that this is the extracted honey age of bee keeping. Let me give an illustration of about the way things are going: I have just returned from a visit to Mr. E. D. Townsend. He has always produced some comb honey, says its production has for him a peculiar fascination. He usually has one apiary devoted to comb honey, but he has about decided to give it up. Thinks he will run it for comb honey about one more year, in order to use up the supplies on hand, then change over to extracted. He says that he has to put in enough more work on this apiary to run two or three more yards for extracted honey. O. H. Townsend, of Otsego, Michigan, was once a comb producer, but has abandoned it, and is now running out-apiaries for extracted honey. More and more are men beginning to "keep more bees," and this change is almost invariably followed by a change to extracted honey production.

Some bee keepers seem to lament this condition of affairs; they seem to resent it because so much attention is given to extracted honey; the Review has been blamed for "booming" this branch of the industry; but it must be remembered that this change has not been brought about from being "boomed" by the Review, or any other bee journal; it is the result of *natural causes*, and can neither be hastened nor hindered.

The Pettit, Improved, Honey Strainer.

The gravity honey strainer has not yet been adopted in the East; whether it will come into general use, remains to be seen. At present bee keepers strain their honey through cheese cloth. The great objection to the ordinary form of strainer, as generally used, is that the cloth is in a horizontal position, and as the honey runs out, the scum and cappings are left on the cloth. The straining surface ought to be vertical, or else kept below the surface of the honey.



The Pettit Honey Strainer.

It will be remembered that Mr. S. T. Pettit, of Canada, illustrated and described a strainer last spring. It was a round vessel of wire cloth, with a flat bottom, placed inside of a vessel of tin, with a space between the walls of the two vessels. The inside of the wire cloth vessel was lined with cheese cloth. One advantage of this strainer was that a large portion of its straining surface was perpendicular. Mr. Pettit has since made some improvements in his strainer, the most decided of which are the double, vertical, cross-strainers in the bottom. Perhaps there is no more graphic way of describing this feature than to say that the bottom of the inside, wire cloth vessel has deep *wrinkles* in its upper surface. There are three of these wrinkles or double folds, and they are five inches deep; the side walls being one-half inch apart. As the wire cloth basket is 15 inches square, these cross-sections add over three square feet to the straining surface; and at a point where the pressure is greatest. This feature is decidedly novel, original and valuable. As the strainer is now made square instead of round, and is eight and one-half inches deep, there are eight square feet of straining surface; and, as already mentioned, nearly all of it ($6\frac{1}{2}$ feet) is *vertical*. The strainer holds about a bushel. The outside box is of tin, 16 inches square and 10 inches deep.

There is a large gate at the bottom of the tin can, but this is not shown in the accompanying engraving—simply the hole where the gate is to be placed. Of course, the inside is lined with cheese cloth; that is, a piece of cloth of the right size is laid in the strainer and nicely folded or fitted to all of the inner parts. Cheese cloth varies in weight and texture, and care should be taken in its selection. No handles are shown in the cut, but they might be added to the strainer to make it more convenient in handling.



Winter Bee Keeping.

When all things go well in the summer, there is nothing that a bee keeper enjoys more than bee keeping; but little has been said of the joys of winter bee keeping. Perhaps some of you think there are none. I know there are sorrows in winter bee keeping, when the bees are not wintering well, but, when all goes well, there are deep delights to the man who has a mind for such things. Come with me to my bee cellar, up in the edge of the woods. What's the temperature outside? Twelve degrees above zero. I'll unlock the little door in the gable end of the roof. We crawl in, but can't stand upright, as the roof is too low. The dry, planer shavings and sawdust that cover

the ceiling to the cellar, a foot and a half deep, come clear up and meet the roof and lap on it a foot or more down at the eaves. The roof overhead, and the boards of the gable ends are covered with frost from the moisture that has come up through the hatchway that opens down into the cellar below. We'll crawl along to that hatchway. What a whiff of warm air comes up through it. Listen. Not a sound comes up from below. There's a pile of hives of combs just below this opening, and, by dropping down upon them we get into the cellar; but, before going down, let's light this candle. A candle is safer and better than a lamp. The light is not so bright

blowing through the tops of tall pines. First, let's look at the thermometer. Dry bulb 45 degrees, wet bulb, 42. That's good. There was only one degree difference when the bees were first put in the cellar, but a barrel of lime put into eight or ten pails and set around in different parts of the cellar soon dried out the air.

No, there are no bottom boards on the hive, nor any covers. The tops of the frames are covered with two thicknesses of old carpet. Let's turn up the corners of some of these pieces of carpet. See the little yellow fellows tucked away there so snug, row after row between the white combs. See how quiet they are, how slim, how clean. If they stir at all



The Bee Cellar in the Edge of the Woods—Flint, Mich.

and does not seem to disturb the bees in the least. They will not leave the cluster and fly at it as they will at a bright lamp light. Now we are down in the cellar. Listen again. Yes, there *is* a faint murmur; like a cataract miles and miles away—like the soft winds at night

it simply is to slowly raise a wing, or a leg or the point of the abdomen. Let's look under a hive. Is there any sight in bee keeping more beautiful than that? See that great, golden-brown cluster of bees hanging down beneath the combs until it actually touches the covering of

the hive two inches below. Let's watch them. Do you see a bee move? My little grand son was up here with me a few days ago, and he said "Grandpa, your bees are all dead." I asked him what made him think so. "Why, they don't stir," was his reply. His previous experiences with bees had been with those that "stirred."

Can you doubt for one moment that bees in this condition are wintering perfectly? When I wake in the night there is actually a comfortable feeling comes

over me when I think of those bees snuggled away there, sleeping away the winter with their heads pillowed on snowy combs of sweetness. Some people talk about the cruelty of wintering bees in a dark, dismal cellar. Of course, there are many cellars which are not fit for the wintering of bees, but, with conditions ideal, there is no more comfortable place in winter for bees than in a cellar, and no manner of wintering them in which their energies are more perfectly conserved for the coming of spring.

Selected Articles.

AND EDITORIAL COMMENTS.

A CELLAR THAT FAILED.

Some of the Points to be Considered in
Making a Good Cellar out of a
bad one.

The most interesting article in Gleanings for Dec. 1st, the most interesting to me, is a letter from Fred Krause of Wisconsin, and the editorial comments thereon. It furnishes a text for quite a lot of things that I wish to say, and it is a very appropriate time for the saying—of some of them. The foundation of successful bee keeping here in the North is successful wintering of bees; and, taking one year with another, the most uniform success is secured with the cellar; but the conditions must be right, or the cellar is worse than the open air. For instance, as Mr. Heddon once said, years ago, in a convention, "In a cellar, cold is a *giant*." But I must not forestall the points of my extract. In introducing the letter from Mr. Krause, Mr. Root said:

Where the climate is not too severe, it is undoubtedly better for the beginner to winter outdoors in double-walled hives or winter cases. The problem of cellar

temperature, ventilation, and moisture is a complicated one; and to have conditions ideal there should be a proper balance of all three. Sometimes an excess of water or moisture does no harm; but a combination of too much moisture and low temperature is nearly always fatal. A cellar too warm, with lack of or insufficient ventilation, is equally bad. On the other hand, if a temperature that does not vary much from 45° Fahr. can be maintained, the question of ventilation and moisture is not so important; but a high temperature always calls for a large amount of fresh air. One below 40 is apt to result in too large a consumption of stores, and over-feeding causes dysentery.

About this time of the year we get numerous inquiries, not only as to how to build a cellar, but as to the cause of the bees not wintering in the cellar last year. To avoid repetition of the experience, the inquirer will describe his cellar and the conditions, and then ask whether he can correct the trouble. The following letter is a fair sample of some of those that we get. As it states conditions met by many another we produce it right here, together with our reply.

I wish to get a little information in regard to a bee cellar I built last fall, which proved *not* to be a success in wintering.

I built a stone cellar 14 x 28, and 8 ft. high, inside measure, in a side hill, a mixture of clay and sand. About two-thirds of the cellar is in the hill, and the

rest outside, with a two-foot wall—no windows—only one large stove in the front end. On top of the cellar I have a one-story frame building which I intend to use as a store room. The floor of this room is double matched, with a six-inch space filled with chaff, and also with chaff on top of the floor. I made everything as warm as possible with two sets of doors. The cellar was new when I placed 140 colonies therein last fall. Of this number I lost about 40, and part of those that survived were weak, and the hives seemed very wet and moldy. Only two-thirds of the cellar was occupied.

The trouble seemed to be that the cellar was too cold most of the time—38 degrees. I finally put a six-inch pipe from the room overhead down into the cellar. This seemed to make the bees quieter, but ran the temperature down lower than ever. Sometimes I had it open and sometimes closed.

I put a stove in the cellar and ran the pipe out above the door. I kept a very small fire in the stove every other day, also through January and February. This helped somewhat, but after all it seemed to coax bees out so that they dropped on the cellar floor. The trouble seemed to be I could not make my ventilation work right. The ventilator I put in did not chase out the damp foul air, but let cold air down, as such air is the heaviest.

Now, I don't see how I can get this cellar warm enough without artificial heat. I have two plans I should like to submit to you. One is to set 2 x 4's around in the cellar next to the stone wall, and sheet it all up with flooring, making another wall and air space (but still I would have no ventilation;) and the other is to build an addition on the front end of the cellar, put in a stove, run a pipe through the cellar next to the floor and up through a larger pipe out through the building. While the fire is going, have the large pipe open, and at other times closed. I think that this would work better.

Now, I wish you would consider my plans and tell me which you think is best. Do you think a ventilator is necessary when the cellar is warm enough? I am sure my cellar is too cold. The part of it which is outside, exposed to the weather, freezes through and covers over with frost and ice inside in cold weather. My cellar is endwise in the hillside, east and west, facing east.

FRED A. KRAUSE.

Ridgeland, Wis.

In reply to the foregoing editor Root writes as follows:

It seems very clear that the trouble with your cellar was due to several causes—too low a temperature most of the time, a very uneven one at other times and a lack of proper ventilation. When you applied artificial heat to warm the cellar every other day, you made the temperature too warm on the day when the heat was applied, thus drawing the bees out into the cellar, and on the next day the temperature would drop too low. The alternate warming and cooling would get the bees stirred up. When it was warm the cluster would expand and consume largely of stores; then when it turned too cold it would have a tendency to induce dysentery. A lack of ventilation on top of it all made your cellar a poor place in which to winter bees. An extra lining on the inside would help somewhat; but in a climate like yours it would be our judgment that the cellar should be wholly submerged under ground. If the natural temperature of it runs down to 38, and stays there for months at a time, it would be necessary for you to employ artificial heat. The stove should be a very small one, and capable of dampering down so that only a very moderate warmth would be given off—just enough to maintain a temperature of about 45 degrees Fahr. Then it would be advisable to have the chimney pass through a larger f.l.e. The stove should be in the cellar, and the ventilating pipes should pass through the upper room, and in connection it would be very desirable to have a sub-earth ventilator. This could be opened or closed, depending upon the outside temperature.

The two prime requisites in cellar wintering are uniform temperature, approximately 45, and ventilation. If the temperature goes much below 40 degrees and stays there, it is *almost sure to prove disastrous* to the bees. For the purpose of heating your cellar we would advise you to get a very small drum stove, using no larger than chestnut anthracite coal. A kerosene stove would give off a bad odor, and therefore could not be considered. Bituminous coal burns too fast, and wood is no better.

We specified using no larger than chestnut coal. Sometimes a pea coal can be procured, and it will give just as good results for less money.

I agree with nearly all of Bro. Root's views. It is well known that a

moist atmosphere is the equal of a low temperature. In this connection it is well to remember that a moist atmosphere is not always the result of moisture that comes from the walls of the cellar itself; it may come from the *bees* themselves. Mr. Krause says that his cellar is a stone cellar. I suppose he means that the walls are of stone, and I assume that the walls are laid up with mortar. He says that the walls outside of the earth are two feet thick. As I look at it, there is not much opportunity for moisture to pass either in or out through such walls. Mr. Krause says that the temperature ran as low as 38 degrees, which is too low; but this does not tell it all. From the construction and ventilation, or lack of ventilation, I suspect that the moisture arising from the bees was retained in the cellar and made the air very damp. The use of a hygrometer, or wet- and dry-bulb thermometers, would have settled this point. So many bee keepers report that their temperature is thus and so, but this is the temperature of a single, dry-bulb thermometer, and really tells not more than half of the story.

The first and prime requisite in the successful wintering of bees in a cellar is the quality of the food. Next comes temperature. Ventilation and moisture have a bearing chiefly as they influence temperature. If the temperature is high enough moisture, is not detrimental; in fact, may become beneficial. I think I would prefer a high temperature, that is, one sufficiently high, with moisture, than a low temperature with extreme dryness. A cellar containing a large number of colonies, a large number in proportion to the size of the cellar, so many that they are likely to raise the temperature to a high degree, might better have a damp atmosphere.

When a cellar is too damp there are two methods of getting rid of the moisture; one by ventilation, and the other by the placing of unslacked lime in the cellar. A bushel of unslacked lime will absorb 28 pounds of water in

the slacking process. I have never found any better method of ventilation than that of a large opening in the ceiling of the cellar—one three feet square in a cellar 14 x 16 feet in size. This allows the moist air to escape; and, if too much heat escapes, then the size of the opening must be reduced, or the walls of the cellar given more protection so as to retain more heat. To illustrate: The first winter that we had bees in Northern Michigan, one of the cellars was in a side hill of clay. After the bees were put in there came a heavy rain. The earth around its walls settled down, and the water from the eaves dripped down against the walls, and completely saturated the earth. Close watch was kept of the bees. Along about the middle of winter they began to show signs of restlessness. They were a little noisy, and there was that peculiar sour, close odor so familiar to those who have had bees perish from dysentery. More protection was given by covering the outside cellar door with bags of sawdust, and a barrel of unslacked lime placed in boxes in the cellar. There was not only a rise in temperature, but a greater difference between the readings of the wet- and dry-bulb thermometers, and a difference in the behavior of the bees. They quieted down and wintered well. Our other cellars were all in sand, and were built after the rain, and did not need any lime. Right here let me allude to a point in cellar construction that has been overlooked by many, and that is the character of the walls. I referred to it briefly when I called attention to the impervious character of the walls of the Krause cellar—there is no opportunity for the moisture to escape into the earth. Our cellars, built in dry sand, have walls built of narrow boards, and there is abundant opportunity for the walls to absorb a large portion of the moisture that comes from the bees. The covering over the cellar is sawdust, about 18 inches thick, and there is a roof over the sawdust. The moisture from the bees

is not only absorbed by the walls, or *may* be absorbed by them, but it rises up through the opening already mentioned, and is condensed upon the roof overhead. I have seen frost two inches thick on the roof boards above the sawdust, but it is away from the bees and does no harm,

As Mr. Root says, the primary fault with the Krause cellar is in not being wholly under ground, away from the influence of the outside temperature. I don't know what is the temperature of the earth down below the frost-line, but I judge that it can't be far from 40 or 50 degrees. When living at Rogersville we got water at a spring (Bro. Root will remember it) and the temperature of this water did not vary much from 50 degrees, summer or winter. Again, I one winter, at Rogersville, wintered 32 colonies of bees in a clamp. There was a foot of straw over the hives, then a foot of earth, then six inches of coarse manure, then another foot of earth, covered with another coating of coarse manure. Through a small tube reaching down from the top of the clamp to the bottom, inside, I suspended a thermometer by a string. I often pulled up the thermometer by the string and noted the temperature. All winter long it did not vary from 43 degrees. If we get back into the earth, away from outside influences, there will be no difficulty in keeping the temperature between 40 and 50 degrees, probably about 45 degrees, and there will be no fluctuations, as when artificial heat is used. Of course, I don't know whether it would be possible or not, but, if it is, I would bank up the earth around that one-third of the cellar that is out of doors at the Krause home, letting the earth slope off so gradually that the cellar would all be practically under ground. Mr. Krause says that the floor above the cellar is of chaff, six inches thick, then some more chaff on top of the floor. He does not say how much more chaff is used on top of the floor. This is quite important. Much heat may be escaping through this

floor. After banking up the cellar with earth, and tripling the thickness of the protection above, if necessary, ventilation should be provided by a three-foot shaft passing directly up through the building, and protected above, outside, by a hood. Let there be a slide so that the opening to this shaft may be contracted if necessary. So far as the wintering of the bees is concerned, the shaft is unnecessary. That is, the moisture might be allowed to escape directly into the room above, but it would make the room and its contents very damp—coat the walls with frost, just as Mr. Krause says happened to the walls of the cellar that are out of doors.

Referring again to the hygrometer, with the dry bulb at 45 degrees, I would like not much less than three degrees of difference between that and the wet bulb—four would be very dry for a bee cellar. The drier the air the greater the difference.

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Greatest offer out. Get your friends to subscribe to our magazine and we will make you a present of a \$40.00 Columbia Bicycle—the best made. Ask for particulars, free outfit, and circular telling "How to Start." Address, "The Bicycle Man," 29-31 East 22d Street, New York City, N. Y.

WANTED—Success Magazine wan's an energetic and responsible man or woman in Flint to collect for renewals and solicit new subscriptions during full or spare time. Experience unnecessary. Any one can start among friends and acquaintances and build up a paying and permanent business without capital. Complete outfit and instructions free. Address "Von," Success Magazine, Room 103, Success Magazine Building, New York City, N. Y.

FOR SALE—1,500 pounds of hulled, yellow, sweet clover seed. Small lots, 15 cts. a pound; 100 pounds, 13 cts. a pound. Postage extra. R. L. Snodgrass, Rt. 4, Augusta, Kans. 12-09-11

Wanted White Honey

State kind and how put up and lowest cash price.

CHAS KOEPPEN.
1508 Main St. Frederick, Va.

Choice Honey For Sale

Well ripened, delicious flavor, light golden color, clear as crystal; $7\frac{3}{4}$ to 8 cents. Sample 6 cents, deducted from order. 11-09-31

F. B. CAVANAGH, Hebron, Ind.

Queens of Moore's Strain of Italians

Produce workers that fill the supers, and are not inclined to swarm. They have won a world-wide reputation for honey-gathering, hardiness, gentleness, etc.

Mr. W. Z. Hutchinson, editor of the Bee Keepers' Review, Flint, Mich., says: "As workers, I have never seen them equalled. They seem possessed of a steady, quiet determination that enables them to lay up surplus ahead of others. Easier bees to handle I have never seen."

My queens are all bred from best long-tongued, three-banded red-cloved stock (no other race bred in my apiaries) and the cells are built in strong colonies, well supplied with young bees.

Prices: Untested queens 75c. each; six, \$4.00; dozen, \$7.50 Select untested, \$1.00 each; six, \$5.00; dozen, \$9 Select tested, \$2.00, Extra select tested, \$3.00. Breeders, \$10

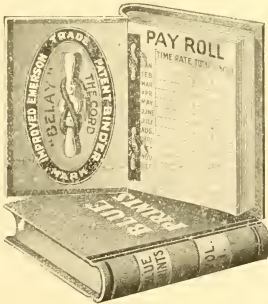
I now have 700 nuclei, and am filling orders by return mail.

Safe arrival and satisfaction guaranteed. Descriptive circular free. Address 1-09-tf

**J. P. Moore, queen-breeder, Rt. 1
Morgan, Ky.**

The Emerson Binder

Much of the value of a bee journal comes from being able to find and refer to any of its issues. Reference is often made to some item or article in a previous issue, and the trouble of finding the back number is often so great that it is neglected. At the end of the year a subscriber often finds that one or two issues are missing and the publisher is not always able to supply them.



All of this trouble may be avoided by the use of a binder. The best binder on the market is the Emerson. It has stiff board covers, bound in heavy cloth, neatly embossed on the front. It is the work of only a moment to place each issue in the binder as it comes to hand, and one binder will hold two years' numbers of the Review.

The price is 75 cts. prepaid, or I will send the Review one year, and a binder for only \$1.60.

W. Z. Hutchinson, Flint, Mich.

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WE BUY AND SELL

HONEY

OF DIFFERENT KINDS

If you have any to dispose of, or if you intend to buy, correspond with us.

We are always in the market for WAX at the highest market price.

HILDRETH & SEGELKEN

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Are VERY well made of fine, white, basswood, with one piece cover and bottom. Can furnish with either corrugated paper or "no drip sticks"

Doll Shipping Cases

are made for any number or size of sections with either two or three-inch glass front.

We have a large stock on hand which means prompt shipment and our prices are the lowest.

Honey Packages in Tin

For shipping or storing extracted honey prevents leakage and taint from wood; being square, they are extra strong and economize space. 1 gallon cans, 10 in a box; 5 gallon cans, 1 or 2 in a box. Send for our estimate for 1909.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

Raspberry-Buckwheat.

Early-blossoming buckwheat near one of our Northern Michigan apiaries gave to the raspberry honey something of a buckwheat color and flavor---enough so that it can't be sold as pure raspberry honey. It is put up in NEW 60-pound cans, and offered at 8 cts. a pound---\$4.80 for a can. Send 10 cts. for a sample and the 10 cts. may apply on an order if you send one.

W. Z. HUTCHINSON, Flint, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.

HONEY WANTED—All grades, comb and extracted. 2,000 cases of buckwheat comb wanted at once. What have you to sell? Third car of water white sage just in. Write for prices.
12-09-11. GRIGGS BROS., Co. Toledo, Ohio.

Baby Chicks 8 cents each, shipped safely anywhere. All kinds fine poultry. Lowest prices. Booklet free.
CULVER POULTRY FARM
11-09-4t 4079 Main Benson, Nebr.



"If goods are wanted quick, send to Pouder."

Established in 1889.

Bee Supplies

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, Veils and a complete stock of Root's standard goods at factory schedule of prices. My equipment, my stock of goods and my shipping facilities cannot be excelled and I ship goods to every state in the Union. Finest white clover honey on hand at all times. I buy beeswax. Illustrated catalog of Bee Supplies sent free,

Walter S. Pouder

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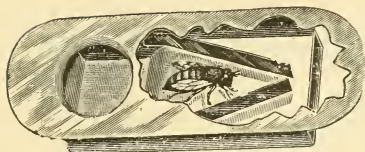
I wish that every one of my subscribers were also readers of the Success Magazine, a 70-page monthly at \$1.00 a year. I have read it for years, and I know that a share of my enthusiasm, courage and perseverance have been gathered from its pages. A man's habitual frame of mind has much to do with his success, and the reading of Success will cheer, and inspire, and encourage, and arouse a man to successful efforts. I can offer the Review and Success one year for only \$1.75.

If you are reading none of the many most excellent magazines of the day, you are missing a great treat. Perhaps you regard them as luxuries. Possibly they are in some instances. They certainly help to fill out our lives, and give us broader views. They are like windows that allow us to look out over the wide world. This life is not one wholly of dollars and cents—at least it ought not to be. Enjoyment, pure and simple, enjoyed just for the sake of the enjoyment, is desirable and beneficial. To many there are few things more enjoyable than the bright pages of a really good magazine; and the Cosmopolitan is the one great magazine of all the great national monthlies. "The best—no matter what it costs," is its motto. The Cosmopolitan is \$1.00 a year, but I can send it and the Review one year for only \$1.75.

Combination Offer

The Review, Success and the Cosmopolitan are each \$1.00 a year, but I will send all three of them for only \$2.25. I will not make one cent on this offer unless I secure 100 subscribers to each of the magazines, when there will be a rebate of \$20.00. It seems as though I would secure that many at this price, but, if I don't, I shall be happy in having helped a few of my readers to secure some most excellent reading at a very low price.

W. Z. HUTCHINSON, Flint, Mich.



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

Honey! Honey!

If you are in want of extracted or comb honey, we will be pleased to quote you, as we have several cars of California honey in stock. Write today for prices and samples.

If you have any honey to offer, state kind it is, how it is put up, and lowest price you expect for same, delivered at Cincinnati.

C. H. W. Weber & Co.

2146-18 Central Ave.

Cincinnati, Ohio

The FOUNTAIN PEN has the “Lucky Curve”

The “lucky curve” is a curve in the feed pipe that brings its inner opening out against the inside of the barrel of the pen, and this arrangement allows capillary attraction to suck the ink out of the feed-pipe when the pen end is held uppermost, thus preventing all leakage. At the same time the feed-pipe is kept moist with ink and ready for business.

There are other good features about the Parker. One is the almost impossibility of breaking the handle. If it breaks from any cause within a year a new one is sent free.

Mr. N. E. France, General Manager of the National Bee Keepers' Association has carried a Parker pen for years, and “swears by it,” so to speak. I have carried one for several years myself, and can truthfully say that I have derived more satisfaction from it than from any other fountain pen that I have ever carried, and I have tried several other kinds. I have offered this pen several years in connection with the Review, and sold a large number of them, and I don't know of a dissatisfied customer. If there is I want to hear from him. There are plenty of pens that I might offer for \$1.00 and make more money than I am making on the Parker, but I care more to furnish my subscribers a good article at a fair profit, than to make a big profit on a cheap pen.

There are different styles of pens varying in price from \$1.50 to \$10.00, depending upon the finish of the handle. My pen cost \$2.00 and, so far as practical use is concerned, it is the equal of any; and I have made arrangements whereby I can send the Review one year and one of the \$2.00 pens for only \$2.50. Safe arrival and satisfaction guaranteed, or money will be refunded.

W. Z. HUTCHINSON
Flint, Michigan

Standard Goods

Of the A. I. Root Co. I have them Hives, Supers, Sections, Foundation, Smokers. Shipping cases: also A. B. C. in Bee Culture. Kept in stock ready to ship. Beeswax wanted. Catalog free.

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Prepare for future success—greatness, prosperity, and happiness—by developing yourself NOW. Your circumstances are only the expression of your mental development and habits, and it is impossible to improve your surroundings unless you **FIRST IMPROVE YOURSELF.**

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THE PROGRESS S.-H. UNIVERSITY,
Rand-McNally Bldg., Chicago,

Gentlemen: Without obligation on my part, send me your free booklet, “The Science of Success,” advertised in the Bee Keepers Review.

Name _____

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A Boomer Warm Air FURNACE

Will keep every room in the house comfortable. No home complete without one.

Feed-opening 13 x 18 inches

Burns knots and refuse wood successfully, and saves fuel bills.

We are experts in the furnace business, and will guarantee satisfaction. Write today for catalog and prices on a complete job.

The Hess-Snyder Co.

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3-09-12t

QUEENS

Clemons' strain of three-banded Italians has no equal. Mr. M. R. Juckett, Poulney, Vt., writes: "I have queens from seven different breeders, and yours are the only ones which have produced honey in the sections."

Mr. N. L. Stevens, president of the New York Bee Keepers Society, Moravia, N. Y., who purchased of me. in 1907, 46 of my cheapest untested queens, writes, Jan. 22, 1909: "The queens I purchased of you in 1907 proved very satisfactory. I bought over 300 queens that season from ten different breeders, and your bees averaged the best of any of them the past season and only one strain was a close competitor. Your bees built up very rapidly, and were good honey-gatherers."

Why pay a high price for the common kind when others report such results? If you don't try a few of my queens we shall both lose money.

Untested queens, 60 cts. each; select untested, 75 cts.; tested, \$1.00 each. Safe arrival and satisfaction guaranteed. 7-08 St

H. C. CLEMONS, Boyd, Ky.

— A full line of —

BEE KEEPERS' SUPPLIES

My patent section machine at half price. A new queen nursery and queen rearing outfit. Queens from imported Italian, Caucasian and Carniolan stock; also Adel queens. Send for catalog and price list.

CHAS. MONDENG,

160. Newton Ave., North,

North Minneapolis, Minn

4-08-tf

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

SAWS

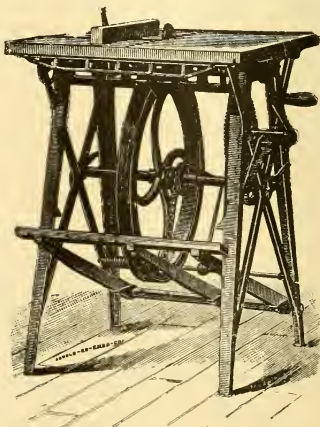
in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

391 Ruby Street

Rockford, - Illinois



Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent, when a shipment sells for as much as one hundred dollars.

KANSAS CITY—We quote as follows per case of 24 sections: No. 1, white, \$3.25; No. 1, amber, \$3.00; white extracted, 7 cts; No. 2, white and amber \$3.00, beeswax, 25 and 30c.

C. C. CLEMONS & CO.,
Oct. 18, 1909. Kansas City, Mo.

BOSTON—No. 1 and fancy white comb wanted. We quote as follows: Fancy white, 16 to 17 cents; No. 1 white, 15 to 16 cents; white extracted, 8 to 9 cents; beeswax, 30 to 32 cents

BLAKE, LEE CO.
4 Chatham Row,
Nov. 22, 1909. Boston, Mass.

DENVER—We quote our local honey market as follows: No. 1 white, per case of 24 sections, \$3.30; No. 1 light amber, per case, \$3.15; No. 2, \$3.00; white extracted, 7½ to 8½ cents; light amber, 6½ to 7½ cents. We pay 24 cents per pound for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASSN.
F. Rauchfuss, Manager.
Sept. 22, 1909. Denver, Colo

NEW YORK CITY—During the past few weeks the demand for comb honey has slackened off somewhat. There is still fair demand for No. 1 and fancy white, but off grades and dark are rather neglected, and not in much demand. While our stock is not large, it is sufficient to meet the demand, and straggling lots are still coming in. We quote fancy white, 15c; No. 1, 14c; off grades, 11 to 13c; buckwheat and dark, 10 to 12c, according to quality. Extracted, demand fair, principally for California, prices ruling the same as our last quotation. Beeswax, steady and in good demand at 30c per lb.

HILDRETH & SEGELKEN,
Greenwich & Murray Sts.
Dec. 23, 1909. New York City, N. Y.

TOLEDO—The demand for comb honey has been only normal, and we look for a slack in these goods soon, as is usual about Dec. 1st, owing to the cold weather which makes the shipping of comb honey risky. So far, fancy grades have met with a ready sale, but amber and dark grades seem to be a drug on the market. Beeswax is in fair demand especially for good yellow stock. We quote as follows: Fancy white 16 to 17; No. 1 white 15 to 16; fancy amber, 14 to 15; No. 1 amber 12 to 13; White, extracted 9 to 10; amber, 8 to 9; beeswax, 28 to 30.

THE GRIGGS BROS. & NICHOLS CO.,
Nov. 22, 1909. Toledo, Ohio

CHICAGO—Fancy comb is scarce, and sells upon arrival as does beeswax, both at top price. We quote as follows: Fancy white, 16 cents; No. 1 white, 15 cents; fancy amber, 12 cents; No. 1 amber, 9 to 10 cents; fancy dark, 9 cents; No. 1 dark, 7 cents; white extracted, 7 to 8 cents; amber extracted, 6 to 7 cents; dark extracted, 6 cents, beeswax 30 to 32 cents.

R. A. BURNETT & CO.,
Dec. 23, 09. 199 S. Water St.

CINCINNATI HONEY MARKET—The demand for comb honey is slackening up, but prices are still firm, however. We are selling it from the store at 16 to 17 cts. by the single case; wholesale from 15 to 16½ cts. according to the quality. The demand for extracted honey is pretty fair, with no change, however. Aster honey in barrels sells at from 5½ to 6½ according to the quantity and quality bought. Fancy table honey from 8 to 10 cts. in 60 pound cans, two cans to a crate. Beeswax is wanted here at 29 cts. cash.

THE FRED W. MUTH CO.
Nov. 22, 09. 51 Walnut St., Cincinnati, Ohio

Italian Queens

By Return Mail. Bright, Golden and Red
Clover Stock, Bred for Beanty
and Business

Select Untested in May, \$1.00 each, or six for \$5.00. Tested, \$1.50 each. After June 1st, 75 cents each; three for \$2.00, six for \$3.75 or \$7.00 per dozen. Tested \$1.00 each. Nuclei on two frames (Hoffman or Danzenbaker) with young queen in May, \$3.00; after June 1st, \$2.50. Safe delivery guaranteed. Circular for 1909 ready. Send for one, it will interest you.

Geo. W. Barnes
3-08-11 Box 310, Norwalk, O.

Imported Queens

Carniolans
Banats
Cyprians

I am wintering a fine lot; each queen bred in 1909 in the native land of its race. Price, \$5; extra selection, \$6. Order early and have queen whenever desired.

Frank Benton, Box 17, Washington, D. C.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

Root Automatic Extractors



No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$23.00

No. 27—Four-frame Root Automatic for frames not over 11 $\frac{1}{2}$ in. deep, 34 in. in diameter (weight 210 lbs.) 27.00

No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00

No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00

GASOLINE ENGINE with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of

labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



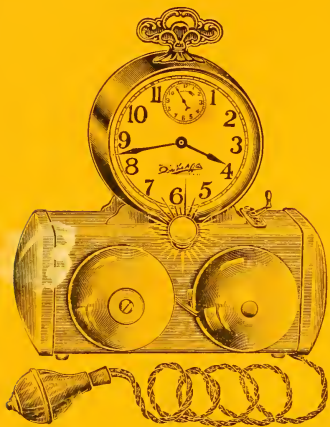
The A. I. Root Company, Medina, Ohio

FEBRUARY, 1910



Flint, Michigan, \$1.00 a

"Search-Light"



At last I have found a useful premium that has the added charm of novelty.

Did you ever wake up in the night and wish that you knew what time it was? Perhaps you must take an early train, or get an early start to town. You wait to hear the clock strike, and go to sleep while you are waiting—perhaps oversleep. It may be so important to know the time that you scramble out in the cold, fish a match out of your clothes, find your watch, and learn that it is only two o'clock. You go back to bed all waked up—perhaps it is an hour before you go to sleep. Perhaps you are caring for a sick person who must take medicine at stated intervals, and you must either keep a light burning, or else strike a light every little while. In short, where is the person who does not sometimes wake in the night and wish he "knew what time it was?"

There is an easy manner in which this can be accomplished, and this is by the use of a "Search Light" clock, the face of which can be lighted up instantly with a tiny electric light, by simply pressing a button at the end of a cord. Inside the clock is a dry battery that furnishes the electricity. The clock may be set upon a chair, or table, or bureau, or shelf, any

place where it can be seen from the bed, and the little wooden ball with the button in one end placed under the pillow, or laid upon a chair by the side of the bed, or in any easily accessible place. When you wake in the night and wish to know the time, simply press this button, and the face of the clock lights up instantly. The figures are large and clear and the time can be told clear across the room.

But this is not all. It can be used as an alarm clock. There is no alarm to wind, as in the ordinary alarm clock. Simply set the little hand, in the upper part of the face, at the hour that you wish the alarm to go off, and turn the little switch at the right of the face, and when the hour arrives, the bell will not only ring, but it will keep on ringing until you get up and turn off the switch. It won't ring a few seconds, and then stop and allow you to go to sleep again. It will ring all day unless you turn off the switch.

There is still another use to which this clock can be put, that of a call-bell. It can be so arranged that the pressing of the button at the end of the cord will cause the bell to ring. Suppose a person is sick, the clock can be placed where the nurse will hear it if the bell rings, and the bulb with the button can be under the pillow of the patient, and he can press the button any time the nurse is needed.

Aside from all this, the clock is an excellent time piece. It keeps even time with my \$55 Waltham watch, which does not vary a minute week after week when compared with the regulator clocks at the jewelers'. The clock is finished in what is called old copper, and is really a handsome piece of furniture. The battery will last, probably about two years, possibly three, and when it becomes weak, a new one can be bought for 25 cts. at any hardware store, and even a boy could put it in place.

The price of the clock is \$3.50, but by getting them at wholesale, I am able to send the Review free for one year to the man who buys one of these clocks. That is the Review one year, and a clock for only \$3.50. They will be shipped by express from Chicago, charges to be paid by the purchaser. The charges on mine were 55 cents.

W. Z. Hutchinson, Flint, Mich.

"DADANT'S FOUNDATION"

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

NOW, THEN---BEE SUPPLIES!

The Muth Special Hive differs from the regular old style in that the bottom and cover are made so perfect they cannot warp. Also a honey-board goes with each hive so you can place a Porter Bee Escape therein and remove the honey with never a sting. And furthermore, the lumber and workmanship is the best in any hive made.

The Truly Satisfactory Hive for Bee Men is

The Muth Special Hive, complete in every detail

We want to figure with you for your 1910 wants. Whatever they may be we can supply them promptly, well. A catalogue for the asking, you know.

THE FRED W. MUTH CO.

51 Walnut St.

THE BUSY BEE MEN

Cincinnati, Ohio.

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

DITTMER'S FOUNDATION

Why do thousands of Beekeepers prefer it to other makes? Because the bees like it best and accept it more readily.

**DITTMER'S PROCESS
IS DITTMER'S**

it stands on its OWN NAME and its OWN FOUNDATION, to which alone it owes its reputation and merits.

We are now ready to make prices for next season, for WORKING WAX for CASH and for full line of supplies.

Wholesale and Retail.

Free Catalogue and Samples.

Gus Dittmer Co.,
Augusta, Wisconsin

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square. Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.
Jamestown, N. Y.

Advanced Bee Culture

Is a book of 230 pages—size of page the same as those of the Review. The paper is heavy, enameled book. The pictures are simply incomparable with others in the same line. As Dr. Miller says "they are what might be expected from one **almost daft** in that direction."

It first takes up the subject of Bee-Keeping as a Business; then shows the best method of Making a Start in Bee-Keeping; points out the Mistakes in Bee-Keeping; shows the wonderful Influence of Locality; tells what is the Best Stock and how to Secure it; gives points that will enable a bee-keeper to make a wise **Choice of Hive**; shows the necessity and use of Honey Boards and Queen Excluders, describes the various kinds of Sections and Their Adjustment upon the Hive; has a chapter upon the Arrangement of Hives and Buildings; another on Comforts and Conveniences in the Apiary; tells why, and when, and how, to use Shade for Bees; gives most excellent advice on the Use and Abuse of Comb Foundation; then takes up that most puzzling of questions, Increase, its Management and Control; tells how to best manage the Hiving of Bees; devotes several pages and some beautiful illustrations to Commercial Queen Rearing; follows them up with a Chapter on Introducing Queens, giving one plan that **never fails**; then it takes up the Feeding of Bees; following this is a sort of gathering together of the various features already described; showing their relations to one another in the Production of Comb Honey; the reader is next given the **secrets** of Producing Good Extracted Honey at the least possible cost; after the honey is produced, then its Preparation for the Market and Marketing are discussed, then Migratory Bee-Keeping; Out-Apiaries; House-Apiaries; and Apiarian Exhibits at Fairs are each given a chapter; following these are probably the best descriptions and methods of treatment for Foul Brood that have ever been published; after this comes the question of Wintering, which is discussed in all of its phases. The Influence of Food, Temperature, Moisture, Protection, etc.—33 chapters in all.

Price of the book, \$1.20, or, with the Review one year for only \$2.00.

W. L. Hutchinson, Flint, Mich.

CLUBBING OFFERS

Everybody knows about the Bingham smoker. The Conqueror size gives sufficient smoke, and is as good as a larger size, except that it needs filling a little oftener. The price, postpaid, is \$1.00, but I will send the Review one year and a Conqueror for only \$1.75.

Twentieth Century Smokers have a diameter of $3\frac{1}{2}$ inches, are 7 inches deep, have a double draft, double walls lined with asbestos, a hinged, one-piece cover, and the bellows is fastened on with ribbed steel brackets. The price, postage paid, is \$1.25, but I will send one with the Review one year, for only \$1.75.

Advanced Bee Culture is a beautiful book, delightfully written, neatly printed, lavishly illustrated and handsomely bound, but, of greater importance, the reading and heeding of its contents will put any practical bee keeper on the high road to success. Price \$1.20, or the Review one year and the book for only \$2.00.

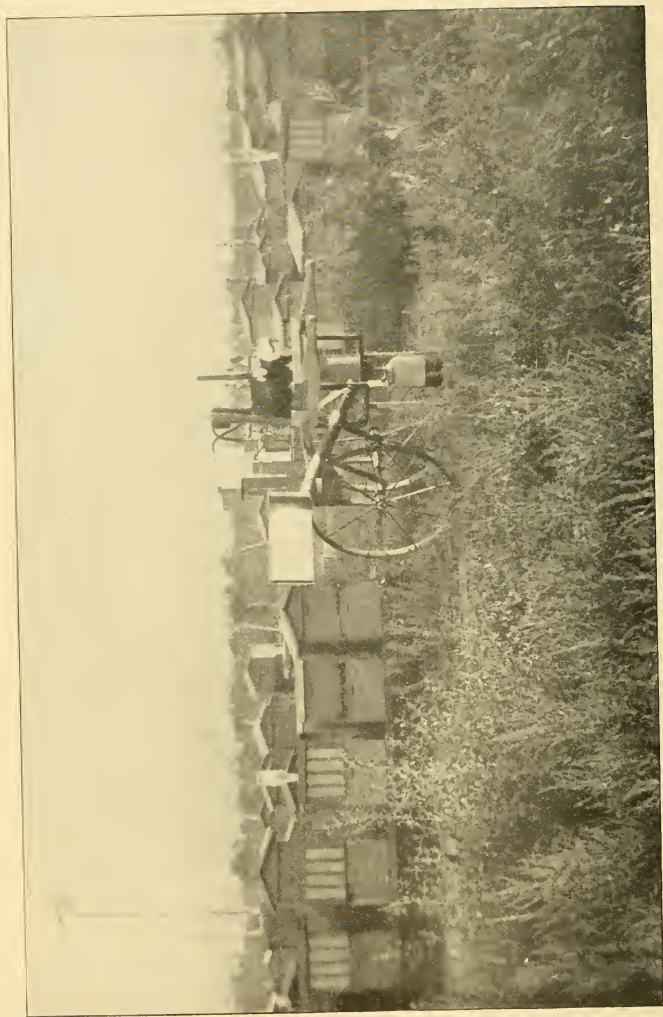
A good fountain pen is a great convenience, and the Parker certainly fills the bill. I have carried one for years, and I know. It does not leak and daub the fingers, while the "lucky curve" feature makes the point always inked, ready for business. The \$2.00 pen is exactly as good as any pen that is made; the higher priced pens simply having more fancy handles. For \$2.50 I'll send the Review one year and a \$2.00, Parker, gold, fountain pen.

The Advanced Bee Veil is the most satisfactory veil that I have ever worn. It is not tucked inside the collar, but is fastened and held down firmly, by a cord, out on the shoulders, several inches from the neck, thus making it simply impossible for the bees to sting the neck through the veil, as is the case with the ordinary veil. Price of the veil is 60 cents, but I'll send the Review one year, and the veil, for only \$1.50.

The Superior Stock strain of Italians bred by J. P. Moore are the equal of any bees in this country. I have tried them, and sold them, year after year, and they always come out ahead. Many a man has blessed the day he bought a queen of this stock. Here is about the way such men write: "The colony of Superior stock that I bought of you last spring filled 140 pound sections that I sold for \$18.60, while my two next best colonies stored only \$11.00 worth, each, of surplus. I am sure that these bees are really superior stock. They kept on storing surplus quite a while after all the other colonies had quit.—A A. Augenstein, Dakota, Ills." The price of a queen is \$1.00, but I'll send you the Review one year, and have Mr. Moore book your order for a queen to be sent next spring, for only \$1.60.

W. Z. HUTCHINSON,

Flint, Mich.



Apiary of L. W. Avant, Atascosa, Tex.

Where honey is extracted by suction without opening the hives.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, FEBRUARY 1, 1910.

NO. 2

Some Details About Extracting Honey Without Opening the Hives.

L. W. AVANT.

MR. Hutchinson: I take pleasure in sending a photo of my latest extractor. This picture gives a general view of the machine, a part of my apiary, also an idea of my plan of feeding back nectar for the production of comb or extracted honey.

HOW THE FEEDING BACK IS DONE.

You will observe that the feeding back is accomplished by the use of an inverted bottle with a neck passing through a hole in the cover, and terminating in a large shallow dish, resting on the top of the frames. A specially constructed vessel, holding at least one gallon, should be used for this purpose. A hole in the top of the vessel should be provided, so that it might be filled without removing.

GASOLINE POWER FOR RUNNING THE EXTRACTOR.

You will notice that the extractor consists of a very small gasoline engine and blower, mounted on a small hand-truck, so that the outfit may be moved about among the hives.

The automatic weighing arrangement consists of a small platform suspended by springs attached to the uprights on

either side of the honey vessel, and of a graduated telescoping tube, fitted at the lower end, with a screw-cap and honey gate, so arranged as to move freely up and down in the air chamber, above which it is connected with the blower.

A SPRING-VALVE THAT REGULATES THE PRESSURE, OR SUCTION.

In the end of the suction-box, adjacent to the slots through which the honey passes, is a long valve or spring-door, so adjusted as to open and admit air when the pressure rises to a given point. This valve serves a double purpose: First, it insures a uniform pressure on the combs; and, secondly, it aids in keeping the honey cleared out of the suction-box by admitting a volume of air which serves to move the honey forward into the telescoping pipes which connect with the air-chamber.

A barometer on the air-chamber (not shown in cut) indicates the pressure, and enables us to determine at all times when we have a practical working pressure.

COST AND CAPACITY OF THE SPECIAL FRAMES.

A set of my special frames, (4) as first made, held considerably less honey than

a set of modern frames, (8) but, as now made, with $\frac{1}{2}$ -inch core, and practically no loss at top and bottom, they hold practically the same amount of honey as eight modern frames. This is due largely to the fact that four frames give five bee-spaces between the combs, while eight frames give nine bee-spaces.

While it is true that one of my special frames will cost considerably more than a modern frame, it is a mistake to suppose that four of my frames will cost *much*, if any, more than eight modern frames with full sheets of foundation. It would not be a fair comparison without full sheets of foundation, since my frames are virtually full sheets of foundation; and, moreover, are made with *parafine* wax. With proper machinery for making the special frames, they could, no doubt, be made much cheaper.

With this machine I have been fairly successful in uncapping honey and extracting early in the season, but, later in season the cappings seem to become heavier and stronger, and it does not do so well. It *can* be done, however, and is only a matter of improvement. Taking honey before it is sealed, somewhat on the Alexander plan, is a great success now.

I wish to suggest the following plan in connection with the use of this extractor; a plan which I am going to test next season. Have only one large brood-nest (10- or 12-frame) for each colony. Be sure that this colony is well stocked by the beginning of the honey flow. Use this brood chamber as long as possible without the liability of swarming or the loss of surplus. In any case, draw out four frames of sealed brood, shake off most of the bees, and form a nucleus with these frames, for the purpose of rearing bees with which to augment the working force of the mother colony at the beginning of the next flow. In place of these four frames, insert two of the special frames in the old colony, one on each outer edge. These frames will hold 10 to 12 pounds of honey, each, and under my plan will

enable me to take care of all the nectar the bees may gather. The withdrawal of this brood, and the insertion of the empty frames, will serve a three-fold purpose: Check swarming, provide for surplus and extra bees, and give combs for future use.

THE SYSTEM AS NOW PLANNED.

Just here I am going to venture on entirely new ground, as far as I know. Mr. E. W. Alexander claims to have doubled his yield by extracting as soon as the bees begin to cap the honey; about every six or seven days during a good flow. I have known colonies to fill their supers in four or five days. This being true, we should be able to obtain two and one-half to three times as much by extracting every day or two. While Mr. Alexander and others claim to be wholly successful in ripening honey artificially, I am inclined to follow a different plan. Fermentation is said to be produced by certain bacteria. Fruits, vegetables, etc., are preserved indefinitely by subjecting them to a certain degree of heat and sealing while hot. It seems to me that honey or nectar might be preserved in the same manner. I have tested this plan this year by extracting nectar before it was sealed, heating it to a temperature of 180° and, while hot, sealing it air tight. I have some of this nectar before me now, in Mason fruit jars, and it seems to be as good as on the day it was sealed. The result of this test is also shown by the report on same by Prof. E. F. Phillips, entomologist of Washington. The object is simply to devise some plan by which the nectar can be preserved for a short time, unimpaired in any manner, and then given back to the bees and ripened, as extracted or comb honey, when the bees have nothing else to do. If it is desired to produce comb honey, the two special frames are removed, and, in their places, are inserted two frames of sections. Thus it will be seen we are endeavoring in a most economical manner to accomplish the main aims in bee culture.

Mr. Hutchinscn, if you see fit you may use the above. If you have any suggestions as to the manner of carrying out my tests in order that the merits of this plan may be fairly and convincingly brought before the public, I would thank you for them.

ATASCOSA, Tex., Nov. 29, 1909.

[I have two reasons for making room for matter regarding the Avant system of harvesting honey by sucking it out of the combs: One reason is that I wish to be perfectly fair, and give every man and invention a show, no matter how visionary the matter; and the other is that some of our most important inventions and discoveries were once considered visionary—yes worse than visionary, actually detrimental.

I admire Mr. Avant. In a way he has made a success of what seems like an impossibility—that of removing the honey from a hive without so much as opening the hive. While it seems as though this inventor had taken up the problem at the wrong end, was working in the wrong direction, no one can say positively that nothing will come from it. Friend Avant and myself have had quite a little correspondence over the matter, and here is the way he came at me one time: "You have had quite a lot of experience with bees, with machinery, with the world, and a lot of other problems, now tell me where you think my system will fail." I will confess that it was something of a poser. I suppose that most of my readers know something of the principle upon which our Texan friend is working, but, some of them may not, so I'll briefly explain that it is something like splitting a comb right down through the middle, leaving one-half of the midrib on one side, and the other half on the other side, with a small space between them. That is not the way that Mr. Avant goes at it, however; his midribs are made of thin metal, having perforations five-to-the-inch, and covered with wax, like foundation; and the bees draw out this wax and make cells on each side. Through

openings in the side of the hive he makes connections with the spaces in the centers of the combs, and by means of a suction pump run by a gasoline engine he secures sufficient vacuum in the spaces in the combs to suck the honey back into these spaces, and even clear out of the spaces and into some kind of receptacle outside of the hives. The suction is even strong enough to cave in the cappings, if not to thick and heavy. His plan, at present, however, is to extract before there has been very much capping of the honey, sterilize the honey, keep it from the air, and, finally, when there is leisure, after the flow is over, feed it back to the bees, producing either comb or extracted honey.

It looks like a round-about-way—like a whole lot of machinery. It seems so much simpler to let the bees store, ripen and cap the honey right in the combs in the first place, either for comb or extracted honey. I know that the claim is made that much more honey is secured by frequent extracting, more than would be secured by the giving of empty combs and allowing the already filled combs to remain on the hive, but I believe that this question is still unsettled. It is claimed that frequent extracting will largely prevent swarming. It will. So will the giving of empty combs, without the extracting. The keeping of green nectar without its souring or deteriorating in any manner seems like a difficult thing to do, but I suppose that even this difficulty may be overcome. That the nectar may be fed back and made into comb honey I have not a particle of doubt. I have had enough experience along this line to make me quite hopeful on this point.

In considering this subject, as well as others, we must not forget that there is such a thing as *habit of thought*. This system is really revolutionary. It goes at the problem in an entirely new and novel manner—really contrary to our habit of considering the harvesting of honey; and it is sometimes hard to give up old ideas and accept new.—EDITOR]

The Stony Road Over Which Beginners Must Travel to Success.

M. P. CADY.



HERE is an old saying that the most important part of anything is its beginning. I doubt if this is true in all cases, but to me there is a peculiar interest in learning how a bee keeper made

his start—those early struggles (and they usually are struggles) have a decided human interest. As a rule, specialists reap the greatest financial success, but, occasionally, a man makes a decided success of bee keeping as a side issue. In this case I put my friend M. P. Cady, of Birnamwood, Wisconsin; and so decided and clear-cut is his success that I finally asked him how he came to start and make the success that he has. His reply was not intended for publication, but it seemed to me so interesting that I prevailed upon him to allow me to lay it before my readers. Here is his letter:--

BIRNAMWOOD, Wis., Oct. 9, 1909.

My dear Mr. Hutchinson,—Some time ago I received your kind invitation to write you a letter in regard to my present prosperity, with other items of interest, and this evening, I will comply.

Some twenty-five years ago I first began keeping bees, starting with an apiary of about fifty colonies, which were taken on shares. The season was cold and generally poor, and for a novice there were many pitfalls. The crop was small, and in the fall I had fourteen colonies as my share of the increase. Although the season was so unfavorable, I became fully in love with the bees, and spent

many happy hours in watching them, while the evenings were spent in eager reading of the bee-books which I was fortunate enough to borrow from an old-time bee-keeper. I read Quinby's book, also that of Prof. Cook, both of which were a constant source of instruction.

My second season was more prosperous. I wintered all my colonies except one, and in the spring bought five more. From these I secured about 1,500 pounds of comb honey, and found myself fairly started in bee keeping with the ambition of making it my sole business. For several years I had varying success, and then came one of those seasons of total failure. I started the season with fifty colonies and bright hopes for a big crop of honey. I closed the season with about 300 pounds of comb honey as my total crop, with bills for supplies to pay—to say nothing about the inconvenient necessity of having *something* to appease the inexorable demands of hunger.

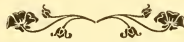
Under these conditions I went 75 miles from home, where my wife and I engaged in school teaching, work which we had both done before our bee keeping days. Together we received \$65 per month, and this seemed like the manna in the wilderness to us. We worked with all our energy, pleased our patrons, and got our combined salary raised to \$80 per month the second year. Under this stimulus we worked, and, finally, having raised our school from a two-department school to a high school, we received a combined salary of \$1,000 per year—which latter salary we received for seven consecutive years. We taught in the Birnamwood schools for 11 years, and in the meantime, by private study, raised

our certificates from the lowest grade issued in our State, to the highest—the Teacher's Life State Certificate, good in any school in the State, and in force during the life of the holder. During these school years I also was employed as a conductor of Teachers' Institutes four summers, and also conducted a private summer school for teachers two summers. My wife and I both loved the work of the class-room, and poured out the best in our lives to the young people who were under our charge, among them we have many of our staunchest friends.

But, how about the bees? Well, the first year after we began teaching, we rented the bees, moving them 30 miles on a wagon with a four-horse team. The season was rather poor, and owing to insufficient ventilation the next winter all the 85 colonies died, except three colonies which I sold to a farmer. The combs were rendered into wax, which was shipped to R. A. Burnett of Chicago, and for which we received 30 cents

per pound. The hives were stacked up, and for a time bee-keeping was forgotten. But the infection was in the blood, and every time an apiary was seen, the school-master went for a brief season to enjoy once more that sweetest of music—the hum of the busy bee. Every summer the clover, the lindens, the fields of buckwheat, the autumnal goldenrod, all called once and again to him to renew the old time friendship; and so he became again the happy owner of a little apiary, and, though the love for the school-room has passed, and likewise four years in one of the great medical schools, and now a busy practice fills the days and often the nights, still the old love endures and the busy bees and the nectar-bloom entice him away from the perplexities of professional life to that simpler life where the responsibilities are not so grave, where the human life is not so frequently dependent upon the decision of the moment.

This, I believe, tells the story.



A Home-Made Machine for Boring End-Bars for Wiring.

L. C. WHEELER.

HERE is no room for doubt in the minds of practical bee keepers of today, that it pays to use full sheets of foundation in the brood nest. It will save its cost the first year, in labor saved for the bees, and in the fact that we get good, straight, worker combs, instead of half drone comb, as so much of it will be if starters alone are used. These combs are a source of joy and profit for the apiarist as long as he uses them.

But, if he uses full sheets, it is a foregone conclusion that he must also use some means of staying them to keep

them from sagging, or tearing loose from the top bars. A few use wood splints for this purpose, but the majority use wire, and the writer is among this number.

As I build all my own hives and frames, I was forced to find some practical means of punching the end-bars for wiring. I tried punching them with an awl, but was far from satisfied with that method. Boring them by hand was entirely too slow to be tolerated, so I devised the machine illustrated herewith.

The machine is designed to bolt to the table of a wood-working machine, with the belt running to the balance wheel.

It can, however, be belted to an old corn sheller, or any other crank machine, or pulley, which will give sufficient speed for practical boring.

The shaft is a small piece of gas pipe with a wood split-pulley fastened at one end, and a small gimlet at the other, fastened securely by a wooden plug fitted into the end of the gas pipe. This plug is halved and gouged out to take in the gimlet shank, and the whole is then driven tightly into the end of the gas pipe or shaft.

The boxings are pieces of hardwood with holes to fit the shaft. Babbit boxings would be better.

The platform which this rests upon is a one by six inch board, $3\frac{1}{2}$ feet long. The sliding table is a one by six inch board, one foot long, with strips nailed on each side, and extending below the edges of the board where it fits over the platform, and slides back and forth to and from the gimlet.

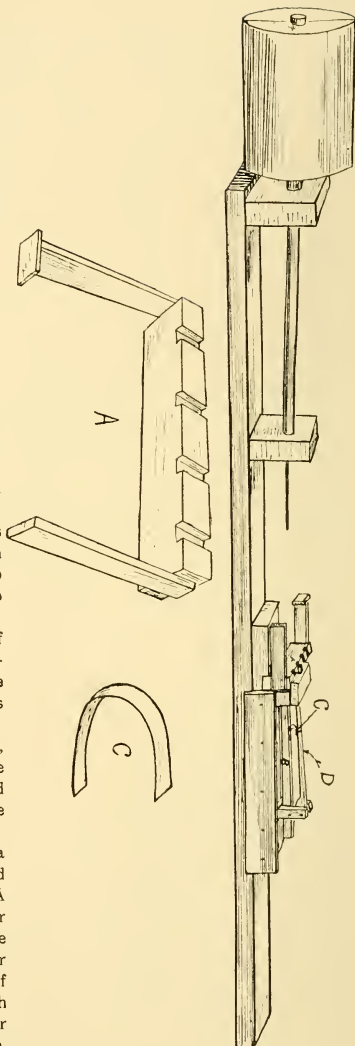
A slide, fastened crosswise of this sliding table, holds the end-bars, and can be moved backwards or forwards to bore holes anywhere from one end to the other of the end bar.

A spring-trigger is fastened back of this, with one end reaching over the bar-holder, which has notches cut to receive the end of the trigger, and hold the bars to the exact place for boring.

Seven end-bars can be bored at once, which takes up the whole length of the gimlet; and a forward and backward movement of the sliding table is all the time it takes to do it.

The trigger-spring is made from a corset steel and the trigger is controlled by the hand which slides the table. A firm grasp of the hand-hold and over the trigger hold the end-bars in place while boring the hole, when the trigger is instantly released, and springs up half an inch, releasing the bar-holder, which is moved to the next notch, the trigger gripped again, the hole bored, and so on, all taking less time than it takes to tell it.

BARRYTON, Mich., Dec. 21, 1909.



A Bar holder.
C Trigger Spring.

B Hand Hold
D Trigger.

Courage and Perserverance, Coupled With Experience, Make a Winning Team.

F. B. CAVANAGH.



HERE are two things which attract an editor's eye when he is seeking contributions. First, a thing worth writing about, and, second, that knowledge cleverly written

up. Theodore Roosevelt went hunting in the African woods, whereby he secured something to write about; he also possessed the ability to tell a bear story, so he sold his article for \$1.00 a word. Now "W. Z." knows I am not a clever writer; he didn't even offer to pay the dollar a word, but in view of the fact that he asked me to write at all, I believe he must have seen me coming out of the woods somewhere, and thinks I have a story.

At the age of 14, just 15 years ago, I started bee keeping with one-half of a hive of bees. The other half belonged to my mother. I took care of both halves, and extracted more stingers by far than I did pounds of honey. Mother and I were the best of partners, and both contributed our share to the welfare of the business. Although we do not still maintain our partnership on the same financial basis, I believe that she still shares the pleasure in watching my successes of today.

My early experiences, some of them laughable in the extreme, were very similar to those of others who made a close study of the business. I was an enthusiast on bees; bought books and read three bee journals, and swallowed everything without winking an eye.

Success attended my efforts from the first. The bees increased to over 100 colonies; and I went through college; meanwhile, buying out my mother's interest, and increasing the bees to over 300 colonies; all run for extracted honey.

Thus far, I had shipped bees by the car load, worked bees on shares for others, and leased apiaries to some extent. Then came the comical part of it all: I sold the goose that laid the golden egg; sold the bees that had paid the expenses of my education. The two years of delightful (?) experiences under such titles as Gen. Mgr., Assistant Superintendent, etc., may be omitted here as foreign to bee keeping interests. In fact these two lean years ate up the seven or more previous fat years by exhausting my capital. Now, this is no hard luck story, but I want to explain this briefly to show just what can be done with bees, even if money is a minus quantity.

Excuse me; I should say, with a wife who is a hustler, bees and experience and a clean record.

My second start wasn't made with one hive, but with 200, three-story hives, equipped for honey. I went in debt for the whole outfit, and for expenses of every description. My calculations were based on the results of similar outfits run under similar conditions. I believed the cause was just and that my creditors were safe, even should the season prove a poor one. It did not, however, as the season was bountiful, and we sold about an even \$2,000 worth of honey and wax from the two apiaries.

The next step was to determine on a location and place suitable for a permanent home. We are now living at Hebron, Indiana, having shipped our bees here from Boscobel, Wisconsin, and added

two additional apiaries. Last summer we ran some 350 colonies, mostly for extracted honey, and, while the season was a poor one, we were amply able to meet all obligations. These bees are fully paid for with the exception of one \$250 note on the first purchase, which is not due until next fall. Also, we have our share of the comforts of life, including a small automobile; paid for.

The results of the past two years are not given for the purpose of inducing some one to go in debt for bees, and, through inexperience, lose everything; but rather to show what can be accomplished with bees even by a common every day fellow of average capabilities and experience.

It is a popular delusion with some people that experience is valuable according to its length. This is wrong. Some of the most ignorant bee keepers in existence are those unread fellows who point with pride to the fact that they have kept bees for 20 or 30 years! I honestly believe that I had as much real back bone and sinew experience squeezed into me during the last two years of bee keeping, as in any other five years of my bee keeping life. We would all be successful if we had some mighty force to make us *do things*, and to *guide* us lest in our efforts we go astray. Let no one believe that we have not put forth our best thought and effort in getting this second start; nor do we hesitate to acknowledge the aid of a higher power whenever we seemed taxed beyond endurance. I firmly believe that heaven helps those who help themselves in an honorable way.

What is the best way to learn bee keeping then? If I may offer a suggestion or two, I would say to start first on a small scale; then hire out to a good, liberal minded bee keeper who not only reads but who is willing to impart knowledge to others. Be more particular about what you are to learn than about the wages you are to receive; for as sure as the knowledge that you re-

ceive is to be worth many times your wages, just so sure you will be an awkward or an ornamental bird in the bee yard for a while.

I advised owning a few bees at first because I know of no surer way to acquire a love for the business than to own and study the habits of bees. While it is not necessary for one to *love* a business in order to make a success of it, with bee keeping I believe one *should* have a natural devotion for the work. I, myself, am something of a naturalist; having exhibited traits in that direction when quite small. One instance is recalled by my mother, when I arrived home with a fat, "warty toad" in each pocket of a very early edition of knee pants. Grasshoppers, snakes mud turtles and other "aquatic insects" were all inspected by this inquisitive boy. Often I arrived home late with the cows because of some investigation of bird, beast or flower. It is, perhaps, enough to say that I have always been devoted to the bees, and to this I attribute much of my success. My first ambition was to see them well fed for winter, and warmly housed, and the honey which followed as a matter of course, took second place in my thoughts.

While commercial bee keeping tends to crowd out sentiment, those early years of devotion are not lost sight of in the struggles of later years; but enable one to forget the hard work in the heated room or atmosphere in striving toward a yet more ideal of modern bee keeping. Knowing the great possibilities in our profession, let us be on the alert to bring the science of bee keeping to the front ranks. To place it where it should belong in significance with the leading industries of today.

In the following articles I do not aspire to say nothing which is old, yet it shall be my endeavor to give only from methods I have employed in actual experience. Remember that no one knows it all, and that no system will work in all locations. We must glean

from each other's experience, and adopt from each that which the conditions involved lead us to believe will be most successful. I trust that some one may be benefited by my experiences, for I

must confess that my success is due largely to having freely partaken of the advice of others who have written for publication.

HEBRON, Ind., Jan. 11, 1910.



Some Praise for the Review Because it Recommends Specialty.

LEE BEAUPRE.

LIKE yourself, Mr. Editor. I have also moved into a new home, just a little over a week ago, and have gone into debt still further than you have, but I have confidence in the bees to help me out if I only get them taken care of as well as I know how. I have stuck to my bees through thick and thin. I have had a steep grade to climb, but have faith that I shall make it yet. Have cleaned up twice for foul brood; also had heavy winter losses, for which I can blame no other thing than that I have always had a farm to work, and the bees have always been neglected.

I most heartily approve the step you have taken in advising keepers to have bees and *nothing else*. I know if I had only of gone into the bees exclusively, nine years ago, when I first went for myself, I would be by far a younger man for my age (36) than I am today.

SHORT, SENSIBLE AND TO THE POINT.

I scarcely know how to explain what I wish to say in regard to the personal editorials, advice, and the good home-talks which you have in nearly every issue of the Review. They are, in fact, a tower of strength to the faltering one, when nearly discouraged and about to give up when misfortune strikes too heavy. When I get your journal I think to myself: "Well, now I have got something to read. Something that I can get some good, sound sense out of." Some

way or other things are put in so as to be understood and remembered. Everything is short and right to the point—different from lots of reading a man often picks up, where he can read and read, and then don't seem to have anything when he gets through.

I live right on the ground where Mr. Holtermann gets his buckwheat honey; at least, the most of it, and I moved, only just last spring, from where he often gets his big crops of white honey. In moving where I am now, I am only coming back home; where I spent 14 years of what you might call my early manhood. I lived in as fine a neighborhood as one would wish, but it is not like being back home where memories of other days still hover around. Yet how different it seems. A goodly number of old faces greet me, but there are blanks which can never be filled, as a good many friends have passed on before. I was away some 10 years, and it does not seem possible that such a short time should make such a change; but when one comes to think of the hymn, where it says, "change and decay are all around," I see it makes one think of looking away to Him who changes not, that he may still abide with us.

Perhaps I am taking quite a privilege in writing in such a manner to you, but in writing it almost seems as though I were writing to an old friend. Pardon me for saying so.

WINTERING BEES IN A HOME-CELLAR HAVING A FURNACE.

Have put 114 colonies away for winter in the east half of my cellar, under the house. The other half has a furnace in it, but I scarcely think that it will interfere with the bees, as it has a good wall between, with a door that can be shut or opened as desired. The worst difficulty that I see is that one has to go through where the bees are every time the furnace needs refilling; also the apples and potatoes and all such winter provisions, are in the same part as the bees. Do you think by going down and through there, as is required, would be too much disturbance, or would it be a good idea to fasten up a sheet so as to screen the bees off still more by themselves?

I use the ten-frame, Langstroth hive, and I believe I have a bottom board which very few have. It is made so as to have a $\frac{3}{4}$ -space under the bottom bars at the back, and slants to a $\frac{1}{4}$ at the front, which gives me that much entrance whenever desired. Of course, I have a block to stop up such an entrance, and this block has an entrance in it $\frac{3}{8}$ by 5 inches. In the cellar, now, I have those entrances wide open; and tight covers on the hives. I have a cover which I would like you to see. It is a flat, ventilated cover, which has a good inch of space over the frames. Under this cover I use, for summer, a Paroid honey board, and, when cooler weather sets in, I intend to have a felt cushion to put on in place of the honey board. The cover has six, $\frac{3}{4}$ -inch holes bored through both ends for ventilation in summer, and they can be stopped by a slide when not needed. As I am somewhat of a carpenter I make all my own hives, so I can have what extras I like.

I believe the hardest thing for me now is to get good queens. I have bought quite a few queens, and have had very poor satisfaction, taking them as a whole. This last summer I tried raising my own queens, and got several very good ones

but had so much other work that I could not follow it up as it should be. It is my intention to have work in shape for next summer so as to make the *bees first*, and then the other work afterwards, and hope thereby to have better success. I have had now about twenty years experience with farming and bees combined, and I would put my name on record in saying that a man who tries to farm and keep bees don't know much about bees, and probably never will. I say again, that you are to have praise for daring to stand out and advocate "more bees." It would be a lot better for this world if there were more Daniels in it. I again ask your pardon, for I have written far more than I ever dreamed I should when I sat down. I wish you a merry Christmas and a very happy New Year, and that you and your good wife may both live a good long while to enjoy your new home.

FORESTVILLE, Ont., Dec. 4, 1909.

[The foregoing is a private letter, and is printed by permission. I often receive such letters, and always feel like sitting down and writing a long letter in return, but lack of time usually robs me of this pleasure. I wish, however, to have these good friends feel that their kindness is appreciated.

The Review has published articles favoring farm-bee keeping, that is farmers keeping bees, and it probably will publish more of that type, because I believe in giving both sides of a question a fair hearing, but, personally, I am a thorough believer in specialty; not only in bee keeping, but in *everything*. I am aware that there are many instances in which bees may be a desirable side-issue, and the bee keeper who is a specialist may also find a desirable side-issue; but suppose a farmer has 80 acres of land, and wishes to add to his income by keeping bees. Instead of doing this, he better do *more* of the very things that he is already doing; or else do them *better*. Instead of putting money into bees, he better buy more land, or better tools. Then think

of a bee keeper with several apiaries trying to add to his income by running a farm. Better start another apiary or two. A whole lot of one kind of work is so much better than a little bit of each of a whole lot of kinds of work.

I would not expect any bad results

from passing to and fro in the part of the cellar where the bees are located. It would do no harm to hang up something in front of them to keep out the light. I rather think I should do it; although I don't know as it would make any difference.—EDITOR.]



EDITORIAL

A Bee Convention is something I have not attended in a year and a half, but I expect to be present at the coming Lansing meeting. Bro. York also expects to be present.

The Odor in a bee cellar is one indication of how the bees are wintering. In a cellar where the bees are suffering from dysentery, or bees in large numbers are leaving the hives and dying on the cellar bottom, the stench is decidedly unpleasant and characteristic. The air in the cellar here at Flint is on the damp order, but is kept dry with lime. The bees are wintering perfectly; scarcely any are leaving the hives, and the air is as sweet and wholesome as a June morning.

Some Moisture Needed in a Bee Cellar.

While we are discussing temperature, ventilation and moisture, and their relation to the successful wintering of bees, let us not forget that some moisture *may* be needed, in some instances, to insure the wintering of the bees in the best condition. As I said last month, I would prefer a moist atmosphere, provided the temperature can be sufficiently high. I believe that the late E. W. Alexander held similar views. This point is brought more forcibly to my mind by a letter just received from Dr. James W. Cowan, of Geneseo N. Y. It read something as follows:

I have about thirty colonies in my cellar, which is well-ventilated, totally dark, and dry as dust. The temperature is 46 degrees, yet, about Dec. 20th, the bees began to buzz; and, as the days passed the buzz became more insistent. I couldn't imagine what was the trouble unless there was a lack of moisture—that they were thirsty—so I took a chance on that. I took a large kettle full of boiling water, and set it up on two bricks in the room occupied by the bees. I then set an alcohol lamp under the kettle, and kept it burning for about six hours. It was surprising to see the amount of water that was evaporated, and the buzz in the hives stopped, and *stayed* stopped. It was very dry last fall, and the honey probably contained very little water.

The cellar here at Flint is rather on the damp order, but the temperature keeps close to 45 degrees, and I have never seen bees in a more ideal condition in the winter. Keep the cellar warm enough, and there is little occasion to worry about the excess of moisture.

Preventing Foundation from Stretching.

At the last convention of the National Association of bee keepers, several members mentioned the use of a new, or not very well-known, method of treating foundation in brood frames, so that it will not sag, and that without the use of wires. The process is simplicity itself, and consists in painting the upper half of the sheet, on both sides, with a thin coating of wax. The wax is put on hot with a wide, flat, paint brush. Just dip the brush into melted wax and apply it

to foundation as one would apply paint to a board. Of course, it adds to the thickness of the foundation, and it is this feature, mainly, that prevents the sagging. The added wax is of a different character—softer and more brittle—and is very easily drawn out.

For those whose only difficulty is that of the sagging of the foundation when it is being drawn out, this plan offers some advantages. For instance, a lighter foundation can be used, and there is much less work in applying the wax, than in wiring the frames, aside from that of preventing the sagging of the foundation. In extracting, or in moving or shipping colonies, the wires are of great assistance in strengthening the combs. My brother Elmer was here recently, on a short visit, and I called his attention to this plan, and he said he would wire frames if for no other reason than the advantage secured in handling them in the extractor.

Michigan State Bee Keepers' Convention.

The Michigan State Bee Keepers' Association will hold its annual convention Feb. 23rd and 24th in the parlor of the Wentworth House, Corner of East Michigan and Grand Ave., Lansing, Mich. The program is as follows:

Wednesday morning—Secretary's report and preliminary business session; Question Box.

Wednesday P. M.—A New Method of Getting rid of Foul Brood, by Ira D. Bartlett, East Jordan, Mich. Discussion; Question Box; Election of Officers.

Wednesday Evening—Size, Ventilation and Construction of Hives, by R. F. Holtermann, Brantford, Ont. Discussion. The Bee Keepers' Real Problem, E. B. Tyrrell, of Detroit, Mich. Discussion. Question Box.

Thursday Morning—President's Address. Some of my Experience as a Farmer-Beekeeper, by W. J. Manley, of Sandusky, Mich. Discussion. Science and Theory of Bee Keeping, by Hon. Geo. E. Hilton, Fremont, Mich.

Thursday P. M.—A few Suggestions, by N. E. France, of Platteville, Wis. Discussion. Question Box. Adjournment.

The rates at the hotel are \$2.00 per day with the use of the parlor, free, as a convention room.

PRIZES.

Best 10 sections of clover honey, one Aspinwall, Non-Swarming Hive, donated by L. A. Aspinwall, Jackson Mich. Second premium, one year's subscription to both Review and Gleanings.

Best 10 sections of raspberry comb honey, 1,000 No. 1 sections, donated by the G. B. Lewis Co., Watertown, Wis. Second premium, one year's subscription to each of Gleanings and Review.

Best 10 pounds of clover extracted honey, \$3.00 worth of bee keepers' supplies, donated by M. H. Hunt and Son, Lansing, Mich. Second premium, one smoker engine and one Bingham uncapping knife, donated by T. F. Bingham, Alma, Mich.

Best 10 pounds of raspberry extracted honey, A B C and X Y Z of Bee Culture, De Luxe binding, donated by the A. I. Root Co., Medina, Ohio. Second premium, 500 No. 1 Lewis sections, donated by A. G. Woodman & Co., Grand Rapids, Mich.

Three pounds of honey containing the least water, one Advanced Bee Veil. Second premium, one Advanced Bee Veil, donated by A. G. Woodman & Co., Grand Rapids, Mich.

Best 10 pounds of beeswax, one Protection Hive, donated by A. G. Woodman & Co., Grand Rapids, Mich. Second premium, one year's subscription to both Gleanings and the Review.

Liquefying Honey with Dry Heat.

For a long time we have been liquefying our honey by placing the vessels in water and then heating the water. For liquefying small quantities in the home, perhaps there is no better way, but the bottler of honey, who has to liquefy it in large quantities, can use a better plan. The great trouble, or one of the troubles, in liquefying honey by placing the vessels in hot water, is that the liquefied honey remains too long at too high a temperature. To remedy this some bottlers have used pumps to draw off the honey as fast as it is melted. All these difficulties may be avoided by using dry heat to melt the honey, and then placing the cans on their sides, or up side down, thus allowing the honey to run out and away from the heat as fast as it is melted. Walter S. Pouder, of Indianapolis, illustrates and describes in Gleanings an oven that he has constructed for this purpose. It is heated by gas, and is large enough to hold half a dozen 60-pound cans. The cans are supported on brackets, in an inverted position, with the caps removed. There is about a foot below the cans, between them and the bottom of the oven; two inches of space above the cans; and about a foot of space between the two rows of cans. The gas burner is between the rows, and about three inches from the bottom of the oven. Where gas is not

obtainable, such an oven could be used over a gasoline stove.

Mr. H. C. Ahlers of Wisconsin, and Elias E. Coveyou of Michigan, both extensive bottlers of honey, have told me that the true principle in liquefying honey is to allow it to run away as fast as melted.



Moving Bees in Winter.

A subscriber of mine living in Iowa has bought 65 colonies of bees, 20 miles from home, and asks me whether he better move them home now (Jan. 6th) on a sleigh, and put them in a good cellar, or wait as late as possible (say March) and still be able to move them on runners.

I don't feel very competent to give advice on this subject. When I began bee keeping I bought six colonies in box hives, and moved them home in January on a sleigh. I then packed them in straw, in a long box, and four of them came through in good condition, while two of them died; apparently of dysentery.

Another thing: I have once or twice known bee keepers to leave their bees out of doors until late in December, until the ground was covered with snow, and the weather cold. They then put their bees into the cellar, and they wintered all right.

Theoretically, I should say that the bees would bear the disturbance now much better than towards spring, when their intestines would be much heavier loaded. Perhaps the only safe thing for me to say is, that if the bees were mine, I would move them now instead of late in the winter.



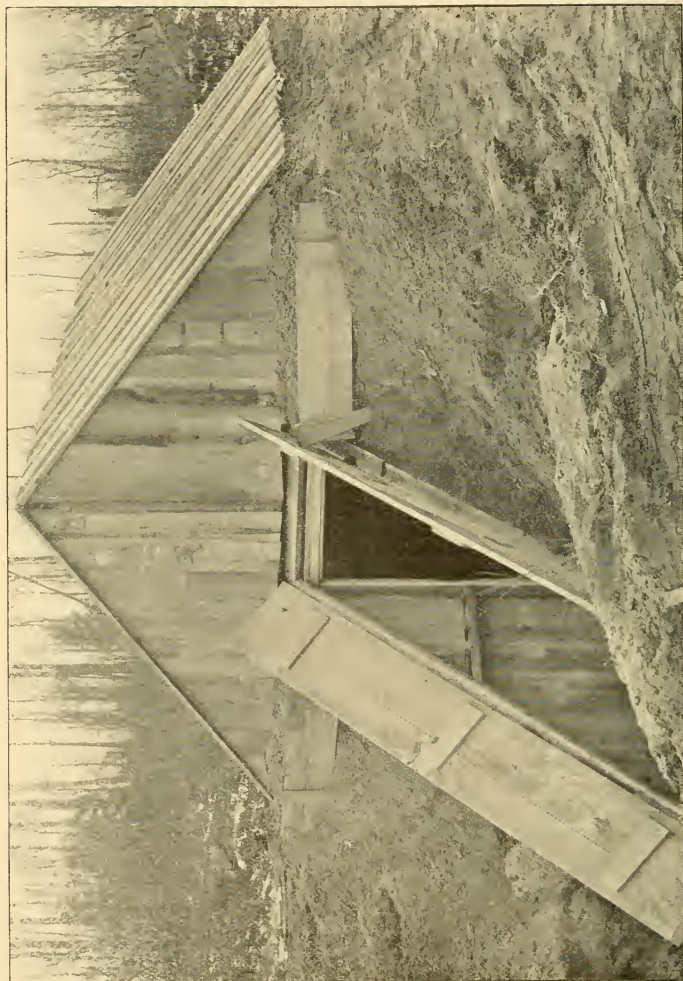
Some Causes of Success.

Nothing is more interesting to me than to watch business enterprises, see them succeed or fail, and learn the reason *why*. It is said that many failures result from a lack of capital, and this is probably true, but that is far from always being the cause. Old, established firms, those that once, at least, had abundant capital, fail, while men with a few dollars start

in a similar business, and gradually climb up to success. Often success comes from doing something a little bit better, or *different*, from what others are doing it. To illustrate, there are two florists in this town; probably both are equally well-equipped for the raising of flowers, but, recently, one has opened a store in the business center of the town. He makes beautiful window displays; changing the display almost daily. He has put on the street a handsome delivery wagon; all varnish, and shine, and plate glass, and gold lettering. He uses generous space in the advertising columns of the daily paper. Unless his competitor "wakes up," who do you suppose will have the flower trade of this town?

I always try to differentiate, and apply the lesson to my own business. I look about for the great successes in the publishing business. I can remember that the Century magazine, soon after the close of the war of the rebellion, published a series of war articles, and thereby ran its circulation up to a point that was then regarded as something phenomenal. To come down to later times, there was Everybody's that increased its circulation several hundreds of thousands by the publication of Lawson's "Frenzied Finance." Scribner's is probably doing something in that line by the publication of the Roosevelt hunting articles. Then I tried to think of some similar success in my own class of journalism; that is, among agricultural, or bee journals. None came to my mind that had gained large circulations by the publication of some wonderful article or series of articles. The most notable successes had come from a general excellence, well-sustained for many years.

The greatest factor in the weal or woe of any business is the man who runs it. It is *brains*, or the right use of them, that brings success. It is enterprise, initiative, *thought*, that lead a man to push ahead and do something bigger, better, or *different*, from the common run.



One of Our Bee Cellars in Northern Michigan.



Krause Bee Cellar—Not Sufficiently Under Ground.

Controlling the Temperature in a Bee Cellar.

Last month considerable space was used in discussing the Krause bee cellar which was built so largely above the ground that the temperature was too low. Since then Mr. Krause has sent me a photograph of his cellar, and written me the following letter:

RIDGELAND, Wis., Dec. 28, 1909.

Friend Hutchinson:

My bee cellar is too cold. The mercury stands at 38. I have partitioned off eight feet in the front end, and have put in a stove today, and am going to try and keep the temperature at the right degree. I think I will pack straw behind and between the hives; and this may help some. I have thought of lining the cellar with a layer of brick, leaving an air space between it and the stone wall. Judging from the photo and my description, how would you fix it for another year?

Yours truly,

FRED KRAUSE.

I can do little more than to repeat, in substance, what I wrote last month. The heat that warms a bee cellar in winter comes from the earth and the

bees. If a considerable portion of the walls are exposed, the heat escapes too rapidly, and the temperature runs too low. The ideal bee cellar is entirely below the surface of the earth. You may remember the picture that I gave last month of my bee cellar here at Flint. It is all under ground, with a roof over head, and a foot and a half of sawdust on the chamber floor beneath the roof. The outside earth comes up several inches above the lower line of the sawdust. Notice the picture upon the opposite page, showing one of our bee cellars in Northern Michigan. In that locality there are nights, and sometimes days, when the mercury drops to 10 or 20 degrees below zero, but it has little effect upon the inside temperature, which does not vary much from 43 to 45 degrees. It is the same in the spring; the first warm days that come do not rouse up the bees. If I had such a cellar as Bro. Krause has, I think that I should bank up around it with earth until it was practically under ground.

The most important question at present, to Mr. Krause, is what shall he do now? I think that he is doing the right thing to put in a stove and raise the temperature, but his success in this line will turn largely upon how well he controls the temperature. I would put in an ordinary-sized, hard-coal, base-burning stove, one with a magazine for holding the coal and feeding it down as the coal burns out. By means of the dampers the fire can be kept under control. Having done this, I would go one step further; I would put in a heat controller. This is an apparatus that will open or close the dampers to the stove, accordingly as the heat rises or falls. It can be set at any desired temperature, and will hold it there to within two or three degrees. If it is set at 50 degrees, as soon as the mercury goes one or two degrees above that point, an electrical connection is formed that touches off the mechanism, and the dampers are closed. As soon as it sinks slightly below 50 degrees, another electrical connection is formed and the dampers fly open. Thus it goes on constantly; the dampers being opened or closed accordingly as the mercury rises or sinks two or three degrees. Such a heat controller costs about \$35 00, but what of that, half a dozen colonies of bees saved will pay the cost.

Let us remember, too, that a dry atmosphere greatly lessens the danger of disaster from a low temperature. Better put a hygrometer in the cellar, and, if the air is too damp, and the temperature low, use unslacked lime freely. It will absorb the moisture and dry out the atmosphere. I have used three barrels of lime this winter in my cellar here at Flint, and may use as much more—I shall if it is needed.

each day. The New York State Inspectors will conduct the meetings, and be assisted by local talent. Everyone interested in apiculture is invited to attend and take part in the discussion. A special invitation is extended to the ladies.

W. D. WRIGHT, Agent.

Comb Versus Extracted Honey.

Here at Flint I have 41 colonies of bees, wintering in a first-class condition. The colonies were fed last August and September, and reared a lot of young bees who have never done any work to amount to anything. They have never helped to gather a harvest, nor to rear very many bees. That the bees are young is shown by the fact that, although they have been in the cellar more than two months, there is scarcely a dead bee on the cellar bottom. The combs are heavy with honey, and I have nearly 80 full combs of honey in reserve to give them in the spring if they need feeding. The colonies are populous; and it looks now as though they would begin the coming season in the pink of condition. As this locality will support a larger number of colonies than this, and the work of caring for them will not be much greater if the number is doubled, I shall probably buy as many more in the spring. I wish to make some increase; to just about double the number would suit me, as that is about as many as I would like to put in the cellar that stands near the apiary. The next spring I would probably ship about 100 colonies to Northern Michigan, keeping the remainder here for further operations. Of course, if I only double the number of colonies, it will be an easy matter, in a fair season, to also produce some honey; and the question arises, which shall it be, comb or extracted?

Bee Keepers' Institutes will be held in New York at the following places: Amsterdam, Feb. 8th; Syracuse, Feb. 9th; Watertown, Feb. 10th; Rochester, Feb. 11th. There will be three sessions

Of course, my later experiences have been with extracted honey, mainly for the reasons given in an editorial last month, but, years ago, it was the other way—mostly with comb honey. For

several years I made a specialty of comb honey production. I did not produce such very large crops, didn't keep enough bees, but have raised as much as 7,000 pounds in one year. One reason that makes me consider comb honey production is that the experience thereby gained may be of some benefit to my readers. Fence separators, plain sections and the Townsend plan of using extracting combs at the sides of the supers, have all sprung into existence since I produced any comb honey. I visited Mr. Townsend recently, and for one long day we sat by the fire and talked bees, and one object of that visit was that I might go over the ground of comb honey production as he is now putting it into practice. I didn't find him very enthusiastic on the subject. He had produced comb honey all of his bee-keeping life; he liked that branch of the business; it was fascinating; he hated to give it up; but it was too expensive. He had one apiary fitted up for comb honey, and should run it for comb honey one more year in order to use up the supplies on hand, then he should drop it. The amount of time put upon this yard would enable him to run about three similar yards for extracted honey.

Now then, there isn't a particle of doubt in my mind that I could run my

apiary here next season for extracted honey, and make more money than to run it for comb honey. Perhaps not receive any more money in the aggregate, possibly even less, but I would be able to do the work with so much less expenditure of time. If there were only the question of which would bring me the most profit, there would not be a moment's hesitation. The only thing that makes me give the comb honey production any consideration, is that the experience may be helpful in editing the Review. If it will, I'm willing to make the sacrifice; but, right on the top of this comes the question, if extracted honey will yield me the most profit, why won't it be the same with my readers? I think this is a fair question for discussion. Don't think that I am bringing up the matter in this way to try and persuade comb honey producers to change to extracted honey. It does not make a cent's worth of difference to me. I only wish to help each one to do that which will yield him the most profit.

The question of swarm-control would not enter into the problem in my case, as when there is increase made, to the extent of doubling the number of colonies, there is no difficulty in preventing swarming, even in comb honey production.

Selected Articles.

AND EDITORIAL COMMENTS.

PREVENTION OF SWARMING.

A Radical Cure for the Swarming Habit of Bees.

As probably most of my readers know, Dr. Jones of Minnesota has published a little book describing a simple system of

management whereby swarming is absolutely prevented. The book is copyrighted, so that no one has a right to copy any of it without permission—to do so brings a liability of prosecution—but I have paid the author a good round sum for the privilege of copying the entire book into the Review—no other journal can print it unless similar arrangements

are made with the author. It will all appear in the Review before the opening of the swarming-season—probably be finished in the April issue. At present I shall neither endorse nor condemn the system, and I would suggest that my readers withhold their judgment until the whole book has been copied, then we can discuss it to our heart's content. Here is the first installment of the book:

(Copyrighted)

The one essential in bee-keeping is results. In this practical age the aim of every progressive bee-keeper is to obtain the greatest results with the least expenditure of time and labor.

While some may engage in apiculture for recreation or a love of the pursuit, without regard to the pecuniary returns, the great rank and file are so situated that they of necessity must look at the matter from a dollar and cent point of view. "How to Reduce the Cost of Honey Production to a Minimum," is the goal which they are seeking.

All short cuts in bee-keeping and all plans to abolish unnecessary manipulation are receiving the thoughtful attention of all up-to-date bee-keepers. Much has been accomplished along these lines in the past, and yet there is an urgent demand for better and simpler methods than are now employed. Bee-keepers, like the rest of humanity, often spend a great deal of time and labor to accomplish a very little thing. Needless manipulation has a money value, whether performed by yourself or someone else, and adds to the cost of production. In no subject relating to apiculture does this apply more strongly than it does to the swarming problem. Natural swarming as practiced by our grandfathers, has no place in modern bee-keeping. The methods advocated today are far ahead of natural swarming, yet none of them give total satisfaction. Numerous and varied are the plans of swarm-control—that do not control. Systems that do not prevent. There is an element of uncertainty and unreliability about each and every method heretofore recommended. Some of them call for costly hives and fixtures, some for an endless amount of manipulation, and some require all the skill of a trained expert to carry them into execution. None are infallible. What the bee-keeping world is watching and waiting for is some better plan—some simple, sure and reliable method that will prevent swarming at all times and

under all circumstances. Is there, or can there be, any management, any process or treatment, that will fulfill these requirements? The answer expected would be "No." The good old orthodox ways appeal strongly to the great majority of bee-keepers, and it seems a difficult thing for them to cut loose from the old methods that have the sanction of antiquity. The myths, fables and superstitions concerning bees—the heritage of our ancestors—still cling to us with a strange persistency, and nearly every advance in bee-keeping has had to encounter the whims, prejudices and conservatism of the masses. In this day of progress and discovery is it safe to deny anything? Many of the unsolved enigmas of the past are being solved today, and why should the non-swarming riddle remain without solution. Now, brother and sister bee-keepers, it may cause you some surprise and it may awaken within you some skepticism when I make the bold broad statement that I can outline a method of treatment that will cure the swarming feature every time and all the time. It will work wherever bees can, as it is founded upon an instinct of the bee which is infallible. The treatment will cure the "swarming impulse" if already acquired, or if given before the bees think of swarming, will prevent swarm preparation. It is either a preventative measure or a curative measure, depending upon the time of giving the treatment. It will and absolutely does prevent all swarming at all times and under all circumstances notwithstanding that old legend that "Bees Do Nothing Invariably."

Not wishing to tax your credulity to the breaking point, nor wishing you to think these lines penned in a spirit of egotism, I will desist from any further preliminary statements, and outline the plan which I have followed for the four years past.

Use all the well known methods early in the spring to get the colonies strong in bees before the honey flow is on. Then when the hives are full to overflowing with bees and you have all the force you want—all the bees needed to gather the harvest—go to these mammoth colonies, open the hives, and with the uncapping knife or some other sharp instrument uncap all the sealed brood you find, except two frames of the sealed brood in each hive, which you leave undisturbed. The two frames of hatching brood will keep up the strength of the colony during the honey flow. Any time within fifteen days give a second treatment, the same

as the first, if you find any colonies making preparations to swarm. This treatment will prevent all swarming, and enable the bee-keeper to keep his whole force of workers together during the honey harvest. The bees at once begin to drag out the headless brood and scatter it far and wide, and in from twelve to twenty-four hours every vestige of brood operated upon will be removed from the hive. The bees will polish up the cells from which they have removed the dead brood, and the queen will begin laying in them at once instead of the bees plugging them full of honey as might be expected. The bees start to work at once with all the vim and energy of a prime swarm, without any further attempt to swarm out. It is simply wonderful how quickly a hive full of loafers can be transformed into the most energetic workers.

Now let us see what the advantages of this method are as compared with the methods previously published. 1st. It starts the bees to work immediately and there will be no loafing, sulking or absconding of swarms, as so frequently happens with shook-swarming or other well known methods of swarm control. 2nd. It represents the saving of an endless amount of labor as compared with other methods. Five to ten minutes is ample time for the first operation and still less if a second is needed. The bees of that colony are then effectually cured of all swarm preparations for that season. As a time-saver it is without a parallel in bee-keeping. Manipulation takes time and has a money value to the bee-keeper. It takes an enormous amount of time to carry out some of the non-swarming systems, and when handling colonies by the hundred it takes a large share of the honey crop to pay for the time spent in useless manipulation. 3rd. The treatment is especially adapted to the comb honey producer's needs, making it as easy to raise comb as extracted honey. The whole of his working force can be kept together throughout the honey flow without any desire to swarm, and every comb honey producer will readily understand what that means. Out yards can be established, and comb honey raised cheaper and with less labor than extracted honey is today, with present methods.

As a rule, give the treatment to the comb honey colonies at the time you put on the second super which should be given when the first super is about half to two-thirds full. This is about the time the bees usually make preparations to

swarm. The first super should be given about ten days before the honey flow is on. When you have all the bees you want, give them the treatment, paying no attention to whether they are making preparations to swarm or not. In either case they will not swarm. Give the treatment to all the colonies that are full of bees. Then, on the next round, notice all the colonies that are working energetically and let them severely alone unless they require more super room; and, if so, give it to them. You can rest assured that there are no swarm preparations—no need of making an examination of the brood nest. If any colonies are found loafing, hanging out, or working in a listless, half-hearted way, and have not accomplished much in the supers, open the hive and examine the brood nest, as swarm preparations are under way. Give them the second treatment at this juncture, and you will have "knocked swarming in the head" for the season as far as that colony is concerned. The comb honey producer can feel that he is master of the situation, being able to run his bees and not have his bees run him.

4th. It is equally adapted to the producer of extracted honey. While it is true that in raising extracted honey, swarming is more easily controlled if supers are given early and often enough so that there will be an abundance of room at all times and no crowding. But in order to carry it into effect the queen must be allowed to roam through the supers at her own inclination. When the brood chamber becomes crowded she establishes a brood nest in the first super and sometimes in the second, and as the honey season advances there will be preparations for swarming in spite of the abundance of room. It is a well known fact that a swarm of bees with a crowded brood nest will swarm even if hived in a barrel or an attic, as the room outside the brood nest proper cuts no figure. And look at the conditions when the bees are managed by giving them plenty of super room. As soon as the queen moves to the first super the bees will commence plugging the old brood nest full of pollen as fast as the young bees hatch out, and you have a lot of pollen clogged combs on your hands. The brood nest will generally be found empty of honey, requiring the feeding of the bees to supply stores for winter. If an excluder is used the bees will fill up the brood nest with winter stores, the same as when raising comb honey, and are not inclined to store everything above.

When extracting frames with young unsealed brood in, the extracting room is no place for company. By the cutting out capped brood plan of managing swarming you put a queen excluder over the brood nest and confine the queen below where she belongs.

When your extracting colony is full to overflowing with bees, open the hive and with your knife cut the heads off all the capped brood except the two frames left to make good the loss of fielders. As a matter of fact, give them the same treatment as the comb honey colony. Give second treatment if any colonies require it. If on your next visit you find the bees going in and out with a rush, pay no attention to it except to give plenty of room in the supers. Examine any that are found clustered out and taking life easy. You will find them preparing to swarm. Repeat the treatment and dismiss all thought of their swarming from your mind. No one would tolerate a brood nest in a second story if it were not that it retards swarming. Certainly a great improvement over present methods when the queen can be kept below and the supers free from brood and pollen, and the matter of increase under perfect control.

5th. It does away with all non-swarming hives and devices, all self-hivers, and all swarm controllers that cost money. Besides, these are usually unsatisfactory and unreliable. The treatment here outlined does not cost a single penny's investment to carry it out; no extra capital invested to add to the cost of production. Every bee-keeper has or should have a smoker and an uncapping knife as a part of his equipment.

6th. There is no hunting of queens with all its vexations. Neither is there any caging or clipping of queens or need for any extra attention directed toward her. There is no pinching of queen cells, as the bees will attend to that better than it can be done by the hand of man. No stacking of brood on other colonies, no bumping of hives around, nor shaking of bees into another hive and compelling them to build a new brood nest during the honey flow. No interruption of the queen's laying right along in the old brood nest. All of these take up valuable time right in the busy season when the rush is on, and even then, after all such fussing, there is no assurance that the bee-keeper has accomplished that which he set out to do. His expectations may be realized and then again they may not.

7th. The ease and simplicity of the treatment makes it a boon to the amateur

bee-keeper. The man with a few bees on a village lot can give treatment and go on about his business knowing that he has his bees under control. The farmer with a few stands of bees to furnish honey for his own use, can give them the treatment at his leisure, feeling confident that he will not be called from his work by that old familiar cry, "The bees are swarming." The professional with his out-yards can raise either comb or extracted honey, feeling sure that there will be no absconding of swarms during his absence. And whether he be amateur or specialist, he can care for double the number of colonies and can double the amount of his honey crop with the same amount of labor. The cost of production will be so cheapened that honey will not be considered a luxury. When this plan of treatment becomes generally known, the honey production of the world will be doubled.

While the above extract gives the main feature of the plan, don't think that the rest of the book is not worth reading; as it tells how the method was discovered, what are its disadvantages as well as advantages, the experience of the author in its use, how to make the most of the plan, etc.

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Queens of Moore's Strain of Italians

Produce workers that fill the supers, and are not inclined to swarm. They have won a world-wide reputation for honey-gathering, hardness, gentleness, etc.

Mr. W. Z. Hutchinson, editor of the Bee Keepers' Review, Flint, Mich., says: "As workers, I have never seen them equalled. They seem possessed of a steady, quiet determination that enables them to lay up surplus ahead of others. Easier bees to handle I have never seen."

My queens are all bred from best long-tongued, three-banded red-cloved stock (no other race bred in my apiaries) and the cells are built in strong colonies, well supplied with young bees.

Prices: Untested queens 75c. each; six, \$4.00; dozen, \$7.50. Select untested, \$1.00 each; six, \$5.00; dozen, \$9. Select tested, \$2.00, Extra select tested, \$3.00. Breeders, \$10.

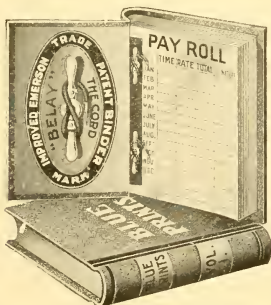
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The Emerson Binder

Much of the value of a bee journal comes from being able to find and refer to any of its issues. Reference is often made to some item or article in a previous issue, and the trouble of finding the back number is often so great that it is neglected. At the end of the year a subscriber often finds that one or two issues are missing and the publisher is not always able to supply them.



All of this trouble may be avoided by the use of a binder. The best binder on the market is the Emerson. It has stiff board covers, bound in heavy cloth, neatly embossed on the front. It is the work of only a moment to place each issue in the binder as it comes to hand, and one binder will hold two years' numbers of the Review.

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W. Z. Hutchinson, Flint, Mich.

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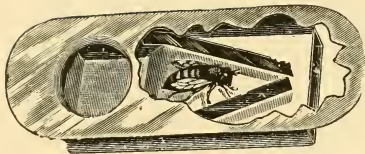
I wish that every one of my subscribers were also readers of the Success Magazine, a 70-page monthly at \$1.00 a year. I have read it for years, and I know that a share of my enthusiasm, courage and perseverance have been gathered from its pages. A man's habitual frame of mind has much to do with his success, and the reading of Success will cheer, and inspire, and encourage, and arouse a man to successful efforts. I can offer the Review and Success one year for only \$1.75.

If you are reading none of the many most excellent magazines of the day, you are missing a great treat. Perhaps you regard them as luxuries. Possibly they are in some instances. They certainly help to fill out our lives, and give us broader views. They are like windows that allow us to look out over the wide world. This life is not one wholly of dollars and cents—at least it ought not to be. Enjoyment, pure and simple, enjoyed just for the sake of the enjoyment, is desirable and beneficial. To many there are few things more enjoyable than the bright pages of a really good magazine; and the Cosmopolitan is the one great magazine of all the great national monthlies. "The best—no matter what it costs," is its motto. The Cosmopolitan is \$1.00 a year, but I can send it and the Review one year for only \$1.75.

Combination Offer

The Review, Success and the Cosmopolitan are each \$1.00 a year, but I will send all three of them for only \$2.25. I will not make one cent on this offer unless I secure 100 subscribers to each of the magazines, when there will be a rebate of \$20.00. It seems as though I would secure that many at this price, but, if I don't, I shall be happy in having helped a few of my readers to secure some most excellent reading at a very low price.

W. Z. HUTCHINSON, Flint, Mich.



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No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

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There are different styles of pens varying in price from \$1.50 to \$10.00, depending upon the finish of the handle. My pen cost \$2.00 and, so far as practical use is concerned, it is the equal of any; and I have made arrangements whereby I can send the Review one year and one of the \$2.00 pens for only \$2.50. Safe arrival and satisfaction guaranteed, or money will be refunded.

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Flint, Michigan

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3-09-12t

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Therefore, as you and I are so much alike a magazine that I make in the fashion that suits me will fit you also. I make

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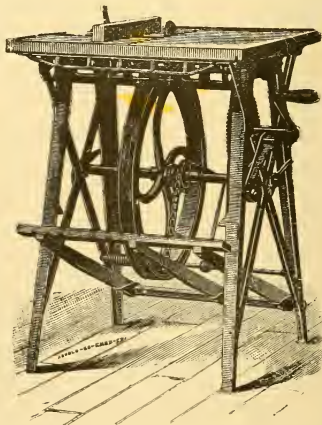
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W. D. SOPER, Jackson, Mich.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

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100 Doubled-Walled Chaff Hives!

Fifty of them are the latest, Root, single-story, chaff hives, for a description see the Root catalog. Fifty are home-made hives, equal to the above, but as they cost less, we will sell them for less. They are all made of white pine, 3/4-inch thick, both inside and out; are 10-frame (Langstroth) wide, (1 1/4 in) built for the Langstroth frame.

These hives have been used six seasons. The Root hives were painted two coats of white paint when nailed up, and the tops of the covers have had several coats of paint since, but will need another coat in the spring. The home-made ones are not painted, except the covers, which have been kept painted. We will set our bees out of these hives into single-walled hives in April or May, and ship the hives in time for this season's use. They will be offered for sale without brood-frames. The chaff-trays will be shipped K. D. without cloth. We will sell the Root hives at \$1.75, and the home-made ones at \$1.25, each. Remember that these hives are nailed up all ready for the frames, or to set the bees into from undesirable hives. It is worth about 50 cts. to nail up one of these chaff hives. This is worth considering.

We, with our migratory bee keeping, do so much moving about, that the unwieldy chaff hive is not suitable for our purpose; this is the reason for offering them for sale.

A photograph and description of the home-made hive will be furnished for the asking.

This bunch of hives will be "snapped up" at this price—a word to the wise is sufficient.

E. D. Townsend & Sons
Remus, Mich.

ITALIAN BEES and *Queens and Supplies. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-11f

1-10-11

Root Automatic Extractors



No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$23.00

No. 27—Four-frame Root Automatic for frames not over 11 $\frac{3}{8}$ in. deep, 34 in. in diameter (weight 210 lbs.) 27.00

No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00

No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00

GASOLINE ENGINE with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

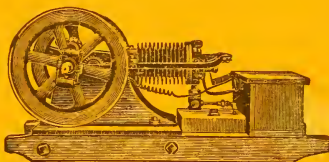
We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of

labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



The A. I. Root Company, Medina, Ohio

MARCH, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 245.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Mar. 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Names of Bee-Keepers

TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand all arranged alphabetically (in the largest States), and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky.... 182	N. C..... 60
Ark.... 82	Kans.. 350	New Mex. 54
Ala.... 80	La..... 38	Oregon... 106
Calif... 378	Mo..... 500	Ohio.... 1300
Colo.... 228	Minn... 334	Penn.... 916
Canada 1200	Mich... 1770	R. I..... 46
Conn... 162	Mass.... 275	S. C..... 40
Dak.... 25	Md..... 94	Tenn.... 172
Del.... 18	Maine... 270	Tex..... 270
Fla.... 100	Miss... 70	Utah.... 68
Ga..... 90	N. Y.... 1700	Vt..... 205
Ind.... 744	Neb.... 345	Va..... 182
Ills.... 1375	N. J.... 130	W. Va.... 178
Iowa.. 800	N. H. ...158	Wash.... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of its members.
To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

President.

W. D. WRIGHT, Altamont, N. Y.

Vice-President.

LOUIS SCHOLL, New Braunfels, Texas.

Secretary.

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Annual Membership \$1.00.

Send dues to Treasurer.

Clubbing List

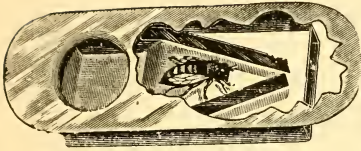
I will send the REVIEW with—

Gleanings, (new).....	(\$1 00).....	\$1 75
American Bee Journal, (new)....	(1 00).....	1.75
Canadian Bee Journal.....	(1 00).....	1.75
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Michigan Farmer.....	(1 00).....	1.65
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IF YOU WISH FOR NEAT, ARTISTIC

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HAVE IT DONE AT THE REVIEW OFFICE



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

Honey! Honey!

If you are in want of extracted or comb honey, we will be pleased to quote you, as we have several cars of California honey in stock. Write today for prices and samples.

If you have any honey to offer, state kind it is, how it is put up, and lowest price you expect for same, delivered at Cincinnati.

C. H. W. Weber & Co.

2146-48 Central Ave.

Cincinnati, Ohio

Italian Queens

**By Return Mail. Bright, Golden and Red
Clover Stock, Bred for Beauty
and Business**

Select Untested in May, \$1.00 each, or six for \$5.00. Tested, \$1.50 each. After June 1st, 75 cents each; three for \$2.00, six for \$3.75 or \$7.00 per dozen. Tested \$1.00 each. Nuclei on two frames (Hoffman or Danzenbaker) with young queen in May, \$3.00; after June 1st, \$2.50. Safe delivery guaranteed. Circular for 1909 ready. Send for one, it will interest you.

Geo. W. Barnes

3-08-tf

Box 340, Norwalk, O.

BEE MEN WHO KNOW

TELL US OUR MUTH SPECIAL IS THE ONLY HIVE ON THE MARKET WORTH WHILE. THE HONEY BOARD FEATURE (WHEREBY YOU CAN USE THE PORTER BEE ESCAPE TO REMOVE THE HONEY WITHOUT GETTING A STING) IS THE FEATURE. BESIDES, THE LUMBER AND WORKMANSHIP IS PERFECT. IT IS THE BEST OF ANY MAKE OF HIVE. IT IS MADE BY FALCONER, THE KING OF BEE HIVE MANUFACTURERS OF AMERICA, SEEING IS BELIEVING. SEND FOR OUR CATALOGUE AND LET US FIGURE WITH YOU FOR ANYTHING IN THE BEE LINE.

THE FRED W. MUTH COMPANY

61 WALNUT STREET THE BUSY BEE MEN CINCINNATI, OHIO

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.

Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,

Canajoharie, N. Y.

DITTMER'S FOUNDATION

Why do thousands of Bee-keepers prefer it to other makes? Because the bees like it best and accept it more readily.

DITTMER'S PROCESS IS DITTMER'S

it stands on its OWN NAME and its OWN FOUNDATION, to which alone it owes its reputation and merits.

We are now ready to make prices for next season, for WORKING WAX for CASH and for full line of supplies.

Wholesale and Retail.

Free Catalogue and Samples.

Gus Dittmer Co.,

Augusta, Wisconsin

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.

Jamestown, N. Y.

Advanced Bee Culture

Is a book of 230 pages—size of page the same as those of the Review. The paper is heavy, enameled book. The pictures are simply incomparable with others in the same line. As Dr. Miller says "they are what might be expected from one **almost daft** in that direction."

It first takes up the subject of Bee-Keeping as a Business; then shows the best method of Making a Start in Bee-Keeping; points out the Mistakes in Bee-Keeping; shows the wonderful Influence of Locality; tells what is the Best Stock and how to Secure it; gives points that will enable a bee-keeper to make a wise **Choice of Hive**; shows the necessity and use of Honey Boards and Queen Excluders, describes the various kinds of Sections and Their Adjustment upon the Hive; has a chapter upon the Arrangement of Hives and Buildings; another on Comforts and Conveniences in the Apiary; tells why, and when, and how, to use Shade for Bees; gives most excellent advice on the Use and Abuse of Comb Foundation; then takes up that most puzzling of questions, Increase, its Management and Control; tells how to best manage the Hiving of Bees; devotes several pages and some beautiful illustrations to Commercial Queen Rearing; follows them up with a Chapter on Introducing Queens, giving one plan that **never fails**; then it takes up the Feeding of Bees; following this is a sort of gathering together of the various features already described; showing their relations to one another in the Production of Comb Honey; the reader is next given the **secrets** of Producing Good Extracted Honey at the least possible cost; after the honey is produced, then its Preparation for the Market and Marketing are discussed, then Migratory Bee-Keeping; Out-Apiaries; House-Apiaries; and Apiarian Exhibits at Fairs are each given a chapter; following these are probably the best descriptions and methods of treatment for Foul Brood that have ever been published; after this comes the question of Wintering, which is discussed in all of its phases. The Influence of Food, Temperature, Moisture, Protection, etc.—33 chapters in all.

Price of the book, \$1.20, or, with the Review one year for only \$2.00.

W. L. Hutchinson, Flint, Mich.

CLUBBING OFFERS

Everybody knows about the Bingham smoker. The Conqueror size gives sufficient smoke, and is as good as a larger size, except that it needs filling a little oftener. The price, postpaid, is \$1.00, but I will send the Review one year and a Conqueror for only \$1.75.

Twentieth Century Smokers have a diameter of $3\frac{1}{2}$ inches, are 7 inches deep, have a double draft, double walls lined with asbestos, a hinged, one-piece cover, and the bellows is fastened on with ribbed steel brackets. The price, postage paid, is \$1.25, but I will send one with the Review one year, for only \$1.75.

Advanced Bee Culture is a beautiful book, delightfully written, neatly printed, lavishly illustrated and handsomely bound, but, of greater importance, the reading and heeding of its contents will put any practical bee keeper on the high road to success. Price \$1.20, or the Review one year and the book for only \$2.00.

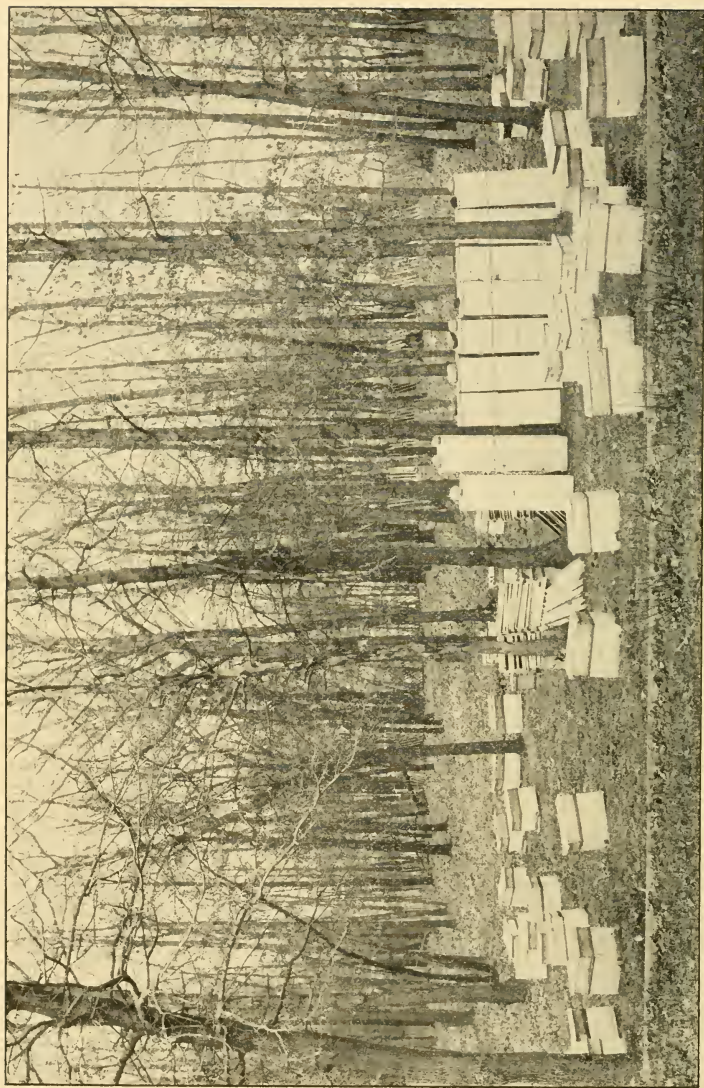
A good fountain pen is a great convenience, and the Parker certainly fills the bill. I have carried one for years, and I know. It does not leak and daub the fingers, while the "lucky curve" feature makes the point always inked, ready for business. The \$2.00 pen is exactly as good as any pen that is made; the higher priced pens simply having more fancy handles. For \$2.50 I'll send the Review one year and a \$2.00, Parker, gold, fountain pen.

The Advanced Bee Veil is the most satisfactory veil that I have ever worn. It is not tucked inside the collar, but is fastened and held down firmly, by a cord, out on the shoulders, several inches from the neck, thus making it simply impossible for the bees to sting the neck through the veil, as is the case with the ordinary veil. Price of the veil is 60 cents, but I'll send the Review one year, and the veil, for only \$1.50.

The Superior Stock strain of Italians bred by J. P. Moore are the equal of any bees in this country. I have tried them, and sold them, year after year, and they always come out ahead. Many a man has blessed the day he bought a queen of this stock. Here is about the way such men write: "The colony of Superior stock that I bought of you last spring filled 140 pound sections that I sold for \$18.60, while my two next best colonies stored only \$11.00 worth, each, of surplus. I am sure that these bees are really superior stock. They kept on storing surplus quite a while after all the other colonies had quit.—A A. Augenstein, Dakota, Ills." The price of a queen is \$1.00, but I'll send you the Review one year, and have Mr. Moore book your order for a queen to be sent next spring, for only \$1.60.

W. Z. HUTCHINSON,

Flint, Mich.



Hives full of Empty Combs, Where the Bees Died a Year ago, at the Review Apiary in Flint.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, MARCH 1, 1910.

NO. 3

If Retreat is Necessary, Let it be Done In Good Order.

W. Z. HUTCHINSON.

IN telling, recently, in the Review, of the mistakes that I had made in a bee keeping way, I mentioned that of trying to winter 100 colonies in the cellar by confining the bees to their hives with half-stories under the hives, and wire cloth over the lower sides of the half-stories. I thought that the screen was so far below the cluster that the bees would not know that they were shut in; but the warm weather, high temperature, aroused them, and soon the screens were covered with a mass of frantic bees. When the winter was half-gone I saw that there would be no live bees left in the hives by spring, unless some radical measures were taken, so I took them out of the cellar and moved them to the yard in the edge of the woods, and removed the half-stories. A few of the colonies were dead, many contained only a handful each of live bees, while a few were in a passably fair condition.

There was no question that the bees and I must make a retreat; that things must go backwards, or downwards, until the coming May. It would be sad, heart

rending, "blasted hopes," and all that, but I set my jaws together, planted a heel firmly on the ground, and resolved that, if retreat must come, it should be done decently and in good order. Not an inch should be relinquished without a fight; and there should be no panic. In spite of all I could do there would be a big loss, but no stone should be left unturned to keep it as low as possible.

HELP FROM PROTECTION.

First, I contracted the entrances to about half an inch square, then I made some division boards out of brood frames by nailing a sheet of straw board on each side of a frame, and filling the hollow space with sawdust. The sheets of straw board were cut such a size as to reach the sides and bottom of the hive. One of these division boards was placed against the side of a hive, the bees against this, then, next to the bees, another division board put in, care being taken that at least one of the combs between the division boards contained plenty of honey. Any colony that could not cover three combs fairly well, was

united with another colony. A quilt was spread over the tops of the frames, then, on top of all, was set one of the half-stories with a wire screen tacked to the lower side, the half-story being filled with sawdust. Of course, this work could be done only on warm days, but Nature seemed to favor me in that direction, giving me one every week or two.

CARE OF EMPTY COMBS.

In spite of all this, colonies would dwindle away and die. I expected that they would, but I was doing all that I could to prevent it. Good care was taken of the combs. They were not left with dead bees matted between them to mould, and rot, and spoil the combs. All were carefully cleaned, when necessary, and stored away in empty hives, carefully closed against mice and squirrels. Empty combs put by themselves, those with a little honey by themselves, and those with a lot of honey by themselves. If I needed a comb of honey at any time, there was no time lost in hunting over a lot of combs to find it.

When the lowest ebb was reached, when the colonies stopped dying, and some of them began to increase by the hatching of brood, when things finally started on the up-grade, 45 hives contained live bees; perhaps half of the colonies were on three combs, each; one-fourth on four or five combs; the rest occupying full hives. When settled warm weather came, and the bees began to crowd against the division boards, I pulled out the boards and let the bees spread out as fast as they thought best. When I thought it was late enough to be safe, I opened up some of the hives of combs and allowed the bees to clean out the honey.

I ought not to have sold any of these bees, but I had done so, and accepted the pay for them, before I had expected any such denouement; accordingly, early in June, 25 colonies were prepared for shipment by robbing weaker ones of combs of bees and brood. This left me with 20

of what were really three-frame nuclei, the fore part of June. There were some 500 or 600 empty combs, and these I guarded with jealous care all summer. We all know that in a lot of combs like this, the bee moth's larvae will make sad havoc, sometimes, with some of the combs, and leave others untouched. I sorted them over quite often, and when I found a comb showing signs of the beginning of this destruction, I used this comb in making increase. By placing the combs an inch or more apart, and exposing them to the light and air, such mischief can usually be prevented. I tried this, but mice and squirrels made such havoc that I had to shut the combs into the hives.

REINFORCEMENTS—TRANSFERRING.

About July 1st I bought ten colonies of bees and added them to my apiary. This, and the manner in which I used them, can scarcely be called part of a retreat; it might more appropriately be called turning the tide of the battle by means of re-inforcements. It is a little early in the season to tell how I managed them, but, it will probably be read with more interest now, right on the heels of this retreat, than it would be later in the season.

These new colonies were in hives of an odd shape, hence I could not use them in connection with my old colonies. I wished to use the bees and brood in building up my weak colonies, and, eventually, to transfer the combs to the regular Langstroth frames, and I wished to do this in the best way, and with the least labor. Here is how I managed: First, I set these ten colonies down right close by the side of my ten weakest colonies. After they had been there two or three days, until the bees had thoroughly marked their locations, I then moved the hives and set them by the side of the ten other colonies. Of course, the flying bees returned and joined the weak colonies, giving them a handsome boost. About a week later these ten colonies that I had bought were given independent

locations of their own; the flying bees, of course, returning and joining the colonies by the side of which they had been sitting. About a week later a hive full of empty combs was placed on top of each of these ten colonies. A week later, the queens of the most populous had mounted to the upper stories, and started to use them as brood nests. The upper stories of combs, to all of them, were now placed upon the stands, the old brood nests being moved away and set by the side of the ten weakest colonies. Before moving any colony away, however, I saw to it that the queen was in the upper story left upon the old stand. If she had not already gone there, I hunted her up, and placed her there, shaking off some of the bees with her. In fact, I shook the bees off perhaps half the brood combs into the new hives left upon the old stands. These newly formed colonies on the old stands now had queens, all of the flying bees, and nearly half of the nurse bees, and they built up nicely. The old hives were now queenless, and robbed of their flying bees, and half of their nurse bees. About ten days later I shook a good share of

the bees from the brood combs of these hives into the hives standing by them. I preferred to have the work of those bees in the hives containing queens. At the end of three weeks, all of the bees in those old hives were shaken into the hives next to them. The combs were now entirely free from brood. The honey harvest was soon over, and, when it was, the bees came and carried away what honey was stored in these old combs, thus leaving them free from both brood and honey. They were nice, straight combs, and it was not much work to cut them out and fit them into Langstroth frames. I hung them in upper stories, and set them over full colonies, that the bees might trim things up and weld together the joints in the combs.

Fall found me the possessor of 41 colonies in ten-frame hives; combs fairly loaded down with honey, and stocked with young bees; besides I had 70 full combs of honey saved for spring feeding. These colonies are wintering perfectly, and I have all of those empty combs, and I am looking forward to making things "hum" the coming season.

FLINT, Mich., March 10, 1910.



Bee Journals, Bee Hives, Brood Frames and Bottom Boards.

MATHILDE CANDLER.



IN the long winter evenings, when the day's work is done, how delightful it is to sit by a warm coal fire, and read a book that we have long coveted or wanted to read but could not

stand the pleasure that there is in reading; just as, I suppose only a smoker can understand the comfort that a man gets out of a pipe or cigar. In both cases it is a passion which has become one of the joys of life.

But it is not only books that I enjoy these evenings, I also enjoy my bee journals and magazines. I keep all my bee papers and have an easy way to file them; and now I look them over and re-read some of the articles that were forgotten or only hurriedly glanced over, during the busy season; and I read, and

indulge in because of the press of other duties. Only a bookworm can under-

dream, and build air castles, and make plans for the future.

I believe in bee papers. Each of the bee journals I am taking has had some article which, to me, has a dollar-and-cent value equal to the subscription price of that journal for the rest of my probable life time. It is not always the direct information obtained from them that counts, but the new ideas which they *suggest*, and the experiments which they induce us to make.

We are controlled not so much by what we think, as by what we have thought. We are governed not so much by our convictions as by the ghosts of our dead convictions. It is this that causes us to get into a rut. Could we shake off these ghosts of dead ideas that have no vitality, but which cling to us just the same, we should have the enthusiasm and earnestness of a boy who knows what he wants (and *gets it too*) coupled with the knowledge and experience of years, and our progress in bee keeping, as in every thing else, would be very much hastened.

We bee keepers cannot afford to get into a rut. I keep more than one bee paper to help me keep out of it—in order to find something new, some live idea. This keeps up the enthusiasm and gives a pleasure that is above dollars and cents; and, if I do not find it in one journal I may in another; for no bee paper can possibly cover the whole field of endeavor in our pursuit.

I am especially interested in those articles that relate to the lessening of cost and manipulation of hives. Hive furniture is not simple enough; and too much time, energy and money are wasted in polish and smoothness, where *accuracy* is really the only thing needed. Then there are too many varieties. These are puzzling to a beginner, and sometimes even to a bee keeper of some experience.

Some time ago I sent for some Langstroth brood frames. They shipped me the short top-bar variety. I do not like these, as I do not want spacers in the frames, and without spacers they slip

down in whenever I tip the hive. I tried lengthening the top-bar, by driving a staple in the end; but gradually the staple will work down into the wood.

Nor do I think it necessary that the top-bar should be so heavy. I have a few frames with top bar only $\frac{7}{8}$ x $\frac{3}{4}$ and they seem to be every bit as good as those with a heavy top-bar. Yet I do think $\frac{3}{8}$ -inch a bit light and would prefer to be on the safe side and have them a *little* thicker. [7-16 suits me—Editor]

The most of my frames are of the triangular top-bar sort. But the frame I like best has a top-bar $\frac{7}{8}$ inch square, and is supported by nails. I have about 800 or 900 of these, and am always glad, upon opening a hive to manipulate frames, when I find one or more of these among them. Bees do not put so much burr and brace comb on these, hence they are easier to lift out. Besides, the nail-supports give so much more room for the fingers to take hold of the frame to draw it out.

There is one disadvantage in this frame. The end-bar is very easily split when driving in the supporting nail. Were it not for this, I think it would be the best and cheapest frame for me. I can prevent this splitting by fastening in an iron clamp and then driving the nail; but this makes the putting together of frames slow work. Possibly, if I had a better arrangement for clamping, it might go better. I wonder if some good bee keeping brother knows of a better way of driving a nail through the end-bar without splitting the wood.

These frames are very movable, but I want them so, and can keep them from moving out of place by notches in the tin at the end of the hive; and it were best if there were spacers at the bottom, too, but I do not want spacers on my *frames*. However, I can attach to my bottom board a wire spacer tacked to a strip of wood as long as the width of the hive. I use a deep, inclined, bottom board two inches deep in front, below the frames, and $\frac{3}{8}$ inch at the back. I

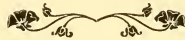
like this deep, inclined bottom. I had them made years ago with the idea that they would be practically self-cleaning, and would do away with the cleaning up of bottoms and entrances clogged up with dead bees and filth. All my hives now have these boards. The moisture runs out of the hive, and ice and snow do not clog up the entrance. Being inclined, there is not room enough to build much comb under the frames, and it is not necessary to put in little racks as Dr. Miller does. And when it is desired to do a little feeding, I just shove under a few sections or a wooden butter dish filled with honey or syrup. Or the caged

queen is shoved in there some times.

Such a deep entrance makes it easy to form a pretty good estimate of the strength of a colony without opening the hive, by simply looking under the frames, through the entrance. It provides good ventilation and tends to lessen swarming. The cost is low, 11½ cents, nailed, at a box factory.

In the winter, of course, the entrance is reduced, by a board which fits in, to ½ inch by the width of the hive. In case a few colonies have only one brood chamber it is still further contracted by throwing a shovelful of dirt into the entrance.

CASSVILLE, Wis. Dec. 1909.



Selling Chunk Honey and Extracted Honey at Twenty Cents.

M. M. BALDRIDGE.



MISS Mathilde Candler, of Wisconsin, wrote me as follows: I see quite a little in the bee papers regarding bulk comb honey. I am very much interested, and wish some more northern men would tell us something about

it. M. M. Baldrige, I believe, sells bulk comb honey in his local market, but he doesn't add extracted honey, if I understand him correctly, and says he cannot supply the demand, at 20 cents a pound; and that with section honey selling in the grocery stores at a less price.

I had quite a lot of cull sections this year, and sold them here in my home market, cutting them out and adding extracted honey. I sold it at 10 cents a pound, the customer supplying the dish, and it went very readily, more than either section or extracted honey. I am planning to try it on a somewhat larger scale next year and do a little advertising to push it along. I believe, in the right hands, it can be made to pay.

I sent the foregoing to Mr. Baldrige and he replied as follows:—EDITOR.

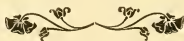
Friend Hutchinson:—Miss Mathilde Candler says she is very much interested regarding bulk comb honey, and wishes some northern man would tell us more about it. She also says that she thinks M. M. Baldrige sells bulk comb honey in his local market, that he does not add extracted honey, and that he cannot supply the demand at 20 cts. per lb. when section honey sells at a less price, in the grocery stores.

In reply I will say that for the past five years or so I have sold nearly all my comb honey in five pound packages, but I often add some liquid honey to the package so as to make it weigh exactly five pounds, net weight. I never sell less than five pounds, nor more than ten pounds of comb or liquid honey at one time to consumers, unless they come to my home and get it. I never sell to grocers, and never pay the least attention to the prices they sell at. I never sell my comb honey, net weight, no wood

whatever, at a less price than liquid honey to consumers, and this has been my practice for many years. I do not plead guilty of selling honey—comb or liquid—for as low a price, as 20 cents per pound to consumers, and I treat all alike, rich or poor, black or white. It is a mistake to say or suppose that I cannot supply the demand for comb honey when selling as indicated to consumers. On the contrary, the demand for comb honey, when consumers can get the liquid honey at the same price per pound, net weight, is so small, that I do not find it very much trouble to supply it.

[Selling unfinished sections as bulk comb honey is a profitable manner of disposing of this product of the apiary; and yet, I'm inclined to the belief that

there is a more profitable use to make of them; that of having them cleaned up and used as bait-sections the next spring. There is a difference of opinion as to whether "baits" ought to be used in the center or the corners of the super, but, if I could have my choice, I would have the first super filled *full* of partly drawn combs. I have seen the sections in such a super filled, capped and ready to come off, when the bees were only getting nicely started in a super containing only sheets of foundation. This early start in the supers relieves the pressure on the brood nest, prevents or delays swarming, and results in just one more super of honey. It is a fact, that a super of partly drawn combs at the opening of the harvest is really worth a super of finished honey—perhaps more.—EDITOR.



Shipping a Car Load of Bees From Wisconsin to Indiana.

F. B. CAVANAGH.



IF veteran bee keepers were asked, what is the most back-breaking, nerve-taxing job connected with bee-keeping, I believe all would be ready to answer: "The shipping of

bees." Trying as the work is, however, there is about it an element of adventure and excitement that tends to smooth out many of the rough places.

When I started for Wisconsin last spring to move my second car of bees, I was still tired from just having made a shipment to Aylesworth. Added to this double dose of moving, the first week brought rain, hail, snow and wind storms, which, in connection with the terribly

bad roads, caused a gloomy outlook, indeed. However, I decided to be game. I crated the extractors which went by local freight, packed loose tools, cut screens and entrance blocks, and made all as nearly ready as possible, mid cold and storm, for the coming battle.

The car, an ordinary 36-foot, stock-car, was to contain about 175 hives of bees, 400 full-depth sets of extracting combs, over a ton of feed-combs of honey, extra hives, tanks, wheel barrow, and miscellaneous tools. Obviously, it was necessary to economize space, though a previous estimate confirmed the fact that all *could* be packed in the car. Every extracting super was crammed to the utmost with combs and frames, leaving extra bodies to be nested or packed with other materials, later.

Upper stories were prepared with about six combs, pressed tightly to one side, and secured by two nails driven into

the ends of the super, from the inside. Screens were tacked on these for use on the strong colonies. In screening, I begin by tacking the nearest corner, then stretch each side in turn, putting a tack in each corner. The screen now lies smooth and taut, but it must be secured with plenty of tacks, or else the bees will push it up and escape all along the road. Lath were cut to the exact length to fit the entrances. I formerly used wire cloth guards, but can see no advantages over the wooden blocks when upper screens are used. In cutting the lath I lay them along in front of each row of hives, so that it is quick work to follow with a saw and box to cut on. I had a good man to help, and we worked lively. While I placed the upper stories he stapled them, and we divided the work of screening the weak colonies, directly over the frames. Each hive was tipped up to examine for cracks; and, meanwhile, I kept watch of my man lest he forget to staple a corner or leave a crack without battening. If you pride yourself on being careful, just wait until you have prepared a few car loads of bees for shipment; remember, too, that it is one thing to ship new, uniformly made hives, and quite another to ship old ones, of varying dimensions.

Up to this time, my negotiations for teams had resulted in only two promises. Farmers had been delayed with planting; the land, a sticky clay, could not be worked when the least bit wet. On the other hand, the roads were hilly, rocky and muddy, so you see it was a race between the fields and the roads to see which would dry off first. The roads had a little the best of it, or else I was more anxious than the farmers. Six teams finally responded; arriving at the Dilley yard about daybreak. We loaded two wagons at a time, and tacked a narrow board on each side of the flat racks to hold the hives in place. If a hive was irregular in size we nailed it. The end hives we nailed solid. Every rack had bolster springs beneath; for this is a

terribly rough and hilly country, I can assure you.

USE CAUTION IN EMPLOYING TEAMSTERS.

Teamsters are usually either *too much* afraid of bees, or else *not enough so*; either attitude being assumed through ignorance of the *real* danger. To avoid accidents, insist on their following instructions *explicitly*. Put veils on the men where the slightest danger exists.

Don't allow the teamsters to bunch the loads together, while on the road; have them several rods apart, so that, if a hive breaks loose, the teams following will not be in danger of stings. Ask each man to watch *his own load*, and then do all the watching possible yourself. Above all, *keep the smoker lit* all the time, so that, if an accident occurs, you can be "Johnny on the spot," with a lighted smoker, and a tool box, to repair the damage *quickly*.

Remember that moving bees is *dangerous* business. Do not allow teamsters to dictate to you in matters depending upon your knowledge and skill. Neither do I think it good policy to be *small* in "treating" while *en route*. Dinners for the crowd, and a few cigars, have often reconciled teamsters to being several hours longer on the road than expected.

We arrived at Petersburg about one o'clock, having been almost five hours in coming eight miles. The bees were unloaded near the switch, as the car had not yet arrived. After dinner I hastened back to the Squiers yard to help my man finish screening. The problem of securing teams became even more serious, as the fields had dried off, and farmers did not consider money as any object. However, a couple of old friends responded (they would not see me "stuck") and we started next morning with four more loads of bees and one of combs. We again set the hives on the ground, as the car was not placed until the following morning. We still had one load of combs and covers to haul. For this I had engaged a Petersburg teamster. He got "stuck," of course, and I secured

an extra team which brought the outfit in at about three o'clock, and just in time to miss the afternoon freight.

PACKING MISCELLANEOUS ARTICLES IN A CAR.

The 400 sets of combs were packed three deep the entire length of the car, the first tier of hives setting directly on top of these. As the first yard had been confined a day the longest, I thought best to put these in the upper deck. The hives being one- and two-story, and the usual variations in style, made it hard to get an even surface for the upper tier. Inch-boards were placed lengthwise on the first tier of hives and the top tier set on these. The reader can imagine that there were no alleys in the center of the car, and barely room enough to crawl around on top of the bees. A space was left near the door, and a kind of pen made around the water tank which was perched up on supers three deep. A board was nailed across the door for convenience in climbing in. The rest of the space in the center of the car was wedged tightly with hives and covers to resist all end-jolting. It was well that the hives were properly braced, for the car received a bump in Chicago which splintered the covers in the center, and jerked the end-hives a foot from the opposite end. I received damages from the railroad company, later.

NECESSITY THE MOTHER OF A USEFUL INVENTION.

We left Petersburg, in the Kickapoo Valley, about 10 a. m. and got started on the main line about noon. The sun came out hot, and the bees demanded lots of water. Finding difficulty in reaching the under tier of hives with water, necessity prompted the invention of a squirt gun; superior in action to any of boyhood days, yet quite inexpensive. It consisted of a small baking powder can with a hole punched in the bottom, and fitted with a wooden plunger well wrapped with cloth tightly and tied with twine. Filled in the usual manner, this gun would throw a stream of water 20

feet. It proved efficient in reaching any hive in the upper or lower tier, although the watering of the latter had to be done mostly at stations, and through the sides of the car.

The trip was completed without serious mishap; the bees having been confined four to five days in all. None were smothered, though, as usual, some frames had worked loose and killed bees.

Several swarms escaped in Chicago, and went hobnobbing after pollen and water with the city bees. This was caused by the jolt previously mentioned. The car was left on the siding until evening, so that the bees were finally hived in Hebron the next morning.

Although the day following was warm, no teams were stung. All teams were ordered ahead by telegraph, so that they met me at the depot. We made only eight loads of what had been 13 on Wisconsin roads. Where bees are liberated during shipment, it is essential to use *plenty* of smoke, and to start unloading early in the morning before the bees begin to fly. I have frequently subdued flying bees sufficiently for safe use of teams by using a series of smudges. Smoke will take the fight out of an angry bee, whether in the hive or in the air, but the latter position is much harder to reach with the smoke.

GETTING QUICK TRANSFERS AT JUNCTION POINTS.

Past experience in shipping bees has proved the advisability of keeping after railroad officials at junction points while *en route*. The car may be routed, and yet there may be failure to make quick connections, through not getting the car transferred to the other road. Usually the yard office (to which I always go at once) is able to state what train will take the car out to the connecting line; or, at least, it will usually find out, and arrange to transfer the car. In large cities, where an enormous traffic renders it impossible to keep track of details, and the connecting yard office is several miles distant, you may need to 'phone, in order to

ascertain the exact time of leaving. This is important, for you can then present some stiff arguments towards being transferred to that particular train. The yard foreman may tell you it is *impossible* to take your car over to the other yard; that he has several cars of livestock, etc., which have to wait with the bees. Tell him that, on account of the extremely perishable nature of bees, confined, you are paying *four times* the rate on live stock, and, hence, are entitled to and *must have* quick service. If things do not then move, get some head official on the 'phone, and paint a picture in his ear that will stir his soul to action in your behalf. If the owner of the bees does not present the situation as being *urgent*, the railroad officials are not going to take it seriously. To them, a car of live bees is nothing more than a huge joke, a car of "hot stuff," or a car of "humming birds," I have heard them say, hence it is the bee keeper's place to explain in a forcible manner the value attached and the danger in delay. Railroad corporations have their systems for economy in service, but they will make exceptions if exceptional cases demand it, and when bees are confined in hives, for five days, the case becomes exceptional.

SOME MISTAKES.

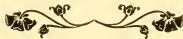
Some mistakes, I recall, in shipping bees. The use of too few tacks in screens. Screening strong colonies directly over the frames. In accepting a

car with leaky roof which admitted rain. When unloading from the car, by permitting more hives than covers to be hauled. It rained on the bees. I stacked supers of feed-combs in the car on the side track and covered them securely. A local switch engine knocked them over and the bees in town robbed the honey and stung the teamster who, later, attempted to load the honey. Next time I shall not keep any feed-combs over. Shipped hives having cracks closed up when moist. Hives dried out during shipment leaking bees. I always nail a strip over a suspicious joint, now.

SHIPPING BEES IN REFRIGERATOR CARS.

I am looking forward to a radical change over present methods of shipping bees. The ventilated, refrigerator car should have something to offer. One trial I know of was very successful, though the distance was too short for a conclusive test. Bees and brood can be brought through in fair condition in a stock car, but the conditions of worry and excitement to fly are far from ideal. Water will quench their thirst but will not keep bees from trying to get out. The effect of sunshine and heat in a stock car sets them wild. With a dark, cold car, I predict that very little ventilation would suffice, and worrying would be alleviated. Has any one any practical experience along these lines, to offer, as a solution to the problem?

HEBRON, Ind., Jan. 15, 1910.



The Psychology of Shaking Bees.

FRANK G. ODELL.

THE highly interesting articles recently published by the Review, dealing with the shaking of bees as a stimulus to honey production, have been received by the bee keeping fraternity with that diversity of opinion which might be expected from a craft

so opinionated and skeptical as ours. Some find the related experiences of Mr. Williams peculiarly coincident with past experiences of their own, which have left their passing mental impression as one of the puzzling things hitherto inexplicable. Others, with that fullness

of wisdom found occasionally in all professions, have lightly "pooh-poohed" the whole business as simply another freak of an experimenter.

The writer recalls one fellow bee man to whose attention he called the initial article of Mr. Williams, and who became greatly interested. Early one morning in the latter part of July his apiary was visited, and Mr. Bee-man found busy shaking his strongest colony of bees in front of the hive; there was no nectar within a hundred miles, and had not been for three weeks. Yet this enthusiast was determined to test the new theory and make those "lazy bees" work. This might be termed carrying a theory to extremes.

That feature of apiculture which invests it with endless fascination to the real lover of Nature is the constant series of surprises to which we are treated by our insect friends. There are just enough of these surprises happening along to set at variance all rules, and teach us that the sum of our knowledge only furnishes a very small unit with which to measure the uncounted things we have yet to learn. After all, our real knowledge of the bee has made comparatively small progress during the past century, when measured by the general progress of the arts and sciences, and when the relative importance of the products of the hive in ancient commerce is compared with that of today, one may wonder whether we have progressed proportionately with the other things since the days of Solomon.

Concerning the matter of "shaking" in general, there is, beyond question, something of value for the practical bee keeper if the real inwardness of the process can be arrived at, even approximately. The underlying reason of a thing and its successful adaptation to practical methods furnish the only logical cause of progress in any channel of productive activity. It is with a belief that there is "a reason" that this article is written.

REASON OR INSTINCT?

About all we know of bees, that is to say, what is printed in the books which have become standard authority, and current publication in the journals, appears to be based upon the conception that the activities of the hive arise purely from instinct or reflex action; as one would walk, or breathe, or digest food. Some of the best scientific thought of the present time has been devoted to the exploitation of this view, which, possibly, may safely be assumed to be correct as a general principle, applying to bees in their natural state, unassociated with man. The theory of reflex action is a convenient one by which to explain things otherwise beyond explanation, and in the sharp controversy over the problem of animal intelligence it affords a convenient peg on which warring scientists may hang their superfluous raiment while in the heat of battle.

Certainly we know that sealed brood, isolated in a hive and allowed to hatch in confinement, widely separated from any other bees which could possibly act as tutors to the young, will develop a company of insects which will carry out all the ordinary hereditary occupations of the hive, and, in so far, as this may bear upon the issue, justify the theory of reflex action; but these same untutored youngsters will presently astound us with some peculiarity of action entirely different from anything ever before encountered, in a manner which causes one to sit up and take notice. We are prone to explain such happenings by the general term of "instinct," which is, in fact, no explanation at all, but the subterfuge of a totally bewildered mind, chiefly desirous of maintaining its public reputation for astuteness.

What we know of thought, intelligence, action proceeding as a result of such thought or intelligence, or reflex action proceeding from specialized nerve centers, is based on our knowledge of the human, taken as a standard of comparison for all other similar problems arising in the

world of animate things. An introspective view of our paucity of knowledge concerning the processes of our own mentality must serve to illuminate our painful ignorance of the real life of the myriads of creatures which lie outside our sphere of action and yet touch us on every hand.

It is with a firm belief in the conscious intelligence of the bee as a reasoning creature, when exercise of the reasoning faculty becomes necessary, that the title of this article has been selected.

SOME INDICATIONS OF INTELLIGENCE IN BEES.

Can any one read the record of Sir John Lubbock's experiments with ants, bees and wasps, verified by the skill of the trained observer, and the absolute accuracy of the scientist, without a belief in the intelligence of the social hymenoptera? Or that masterly series of works by Romanes, which have long given direction to expert scientific investigation in the naturalistic world? This much has certainly been proven, and is no longer susceptible of controversy, that bees possess powers of special sense such as:

- (a) Identification of particular colors, odors, etc.;
- (b) Sense of direction and location in marked degree;
- (c) Memory (certainly an attribute of the mind:)
- (d) Emotions;
- (e) Powers of communication.

If it be susceptible of demonstration that the exercise of any or all of the above noted faculties is of such frequency as to establish their general possession by the species, we have sufficient evidence of mentality to justify a psychological investigation of many perplexing things which arise to confuse the bee man and set at naught the teachings of the books.

This is by no means new or revolutionary doctrine, and it would seem that no apology should be necessary for giving publicity to that which is well affirmed

by the researches of the eminent naturalists referred to, who, in turn, derived their chief inspiration from the labors of the venerated Huber; but we have grown so materialistic in our pursuit of money that we are quite apt to forget the teachings of devoted scholarship. This article is intended as suggestive rather than argumentative, hence this line of thought will not be pursued farther than to suggest that any creature possessed of a nervous system so highly organized and endowed with so many special sense-centers as that of the honey bee, as they are brought into use in the ordinary labors of the hive, opens for the investigator a prolific field in which to search for evidences of mentality.

Mr. Williams has explained, I believe, that the process of shaking confuses the bees to that extent that when they recover their normal poise they naturally revert to their first instinct of production; as the substance of his article is recalled, I believe that he is absolutely correct in this regard. This theory, if true, will go far toward explaining why it is possible to produce extracted honey in such large quantity, over comb, in the same yard, and with the same strain of bees; a proportion far beyond that of the honey actually saved in wax production. It is impossible to produce extracted honey profitably without considerable manipulation of the bees. Possibly more manipulation is resorted to that may be absolutely necessary, but that only adds to the proof; which seems to be fairly good, that the fellow who gets the bumper crop of extracted honey is the one who is continually working with his bees.

It would not be a difficult matter to thoroughly test this theory by actual work in the apiary and it is to be hoped that some of our experimenters will take up this problem the coming season.

THE PSYCHOLOGY OF THE CROWD.

For some years the writer has been specializing public demonstrations with

bees, and both with the desire of adding to the entertaining character of this work and relieving the demonstrator of the monotony of the same repeated performances, countless experiments have been undertaken under all possible conditions. It has been discovered in the course of these experiments that many things can be done with bees, through expert manipulation, under conditions so adverse as to be naturally prohibitive.

THE MORE BEES ARE SHAKEN, THE MORE
TRACTABLE THEY BECOME.

All demonstrators of any experience now understand that the more the bees are shaken up, the more tractable they become, and that the feats which appear the most hazardous are often invested with the least risk to the operator, but the underlying principle which governs this matter is not so generally known. Let us assume, for the purposes of the experiment, that bees are endowed with a reasoning faculty, or, at least, with a degree of conscious intelligence akin to that of the human. This assumption may or may not be correct, but it establishes a hypothetical basis for the investigation of the phenomena incident to the unusual handling of the occupants of the hive.

THE SIMILARITY OF THE CROWD—WHETHER
BEES OR HUMAN.

Upon this line of reasoning the problem becomes purely psychological and is demonstrable upon the same grounds as the psychology of human action under analogous conditions. The presumptive mental state of a mass of bees utterly confused by a vigorous manipulation at the hands of an expert demonstrator is so markedly like that of a crowd of human beings under similar conditions as to be striking in the extreme. The crowd of humans, individually endowed with superior intelligence and power of will, has now but one mind—one impulse—that of the *crowd*, whether the thought of that composite mind be one of pleasure

or of panic. This submergence of the individual intelligence in the mob-movement of the crowd gives rise to one of the most interesting of psychological problems.

In my opinion much the same condition prevails when the bees are vigorously shaken, or otherwise handled in the mass so as to confuse them. What may be termed "a suspension of judgment" ensues. The individual sense of defense or the individual manifestation of any of the marvelous faculties of the insect are submerged by the calamity which has so suddenly overtaken them, and the only impulse is that of a panic-stricken crowd.

AND HYPNOTISM, TOO.

From psychology to hypnotism is only a short journey, and with this I must close, before some of my patient readers begin to see spooks around the bee hive. The psychology of the panic-stricken crowd may explain the mental state of a colony of bees suddenly overtaken by an unforeseen calamity like that outlined above, but how reconcile the repeated recurrence of such a calamity with the sense of memory with which the bee is so plentifully endowed, and which would naturally lead the colony to resent a second attack so disturbing to their domestic economy?

The continued manipulation of a colony of bees for days, sometimes for weeks, in succession, in the confinement of a screened cage, surrounded with crowds of curious people, the very atmosphere being such as to naturally provoke bee-wrath, and this sort of thing going on by day or under the glare of electric light in all sorts of weather, in winter as well as in summer, with the bees continually growing more docile and susceptible to the will of the operator, is explainable only by a condition which would be called hypnotic control were the subjects humans instead of insects. But this is another story which must be left for subsequent telling.

LINCOLN, Nebraska, Nov. 8, 1909.

The Divisible Brood Chamber Hive not The Equal of the Langstroth.

E. EGGEMAN.

MR. Editor: As you ask in the October Review for others to give their experience with the shallow divisible brood chamber hives, especially as to the difference between them and the Langstroth in regard to bees breeding up in early spring, I will tell you some of my observations regarding the same. I want to say that I have had in use for several years a few divisible hives, by using the common shallow extracting supers eight- and ten-frame size. I have also used a number of other sizes as to depth of frames and number to the hives; and, as for a brood hive, I have thrown the divisible hives all away as inferior to the Langstroth. I find after trying and comparing the two, side by side, and under different conditions or manipulations, that the Langstroth is ahead in this locality. My observations and results are about the same as Mr. Townsend's. Sometimes, I, too, had some rousing big colonies in the spring in the divisible brood chambers, but had those bees been on Langstroth frames they, most likely, would have been still stronger. Did you ever investigate to find out the amount or number of bees that seem to loiter around the empty combs, and do not cover and nurse brood, in the divisible hive? It does not matter what size of hive it is; they are simply there to fill a lot of useless spaces. Did you ever notice in the spring how slow the queen is in crossing over from one section to the other to lay and start a brood nest there? Scores of times I have seen enough surplus bees to cover and nurse a Langstroth frame of brood, cluster in the bee-way spaces, and on empty combs of the adjoining section, for a week or more, waiting until they got strong enough in numbers for the queen to establish a patch of brood in that part; and the same conditions will be found to prevail, without any exceptions, to my

knowledge, in any kind of a divisible hive. After steady warm weather, say in June, July and August, I could see but little difference between the two as to the amount of brood cared for.

Now, as to exchanging the two brood sections to force that honey along the top bars into the surplus boxes, it works fairly well, providing the change is made before the honey is *sealed*. If it is sealed, the bees will remove very little, except in two or three central combs.

Again, by hiving a new swarm in a single section, with excluder between that and the boxes above, the result is more or less pollen in the sections, nearly every time; even with one empty brood comb below.

I should judge that in a warmer climate, like that of the Southern States, many of these disadvantages would not be as noticeable.

I have also used a seven-inch deep-frame, eight to the section, which, by using one section through the harvest, gave fine results in section-work, but was not at all satisfactory in other respects.

Now, while I am at it, I want to repeat a little history. I have on hand some 50 hives that once belonged to Adam Grimm, of Jefferson. They are not all exactly alike; for apparently, he, too, was experimenting with hives. Lots of things of some importance that have popped up in the bee journals now and then, I find that he had either adopted or thrown away. Here are a few that are the same, or involve the same principle: Dr. Miller's deep bottom with Alexander feeder, combined; Stachelhausen's rabbit-frame-spacer; Atwater's rabbit clear across the hive-ends with cleat on the outside, and Holtermann's moving screen attachable to the portico. He certainly must have been a bee master.

NEILLSVILLE, Wis., Oct, 20, 1909.

"Go Slow" Before Embarking in the "Chunk Honey" Business.

W. S. PANGBURN.



I have been thinking for some time of writing an article for the Review, but, after reading M. P. Cady's article in the January issue, I about gave it up; for the reason that

he said a good many things that I had in mind. However, I would like to sound a note of warning to those who are becoming, perhaps, a little too enthusiastic over the bulk comb honey business. I refer to those who are intending to give it a trial the coming season. I am not going to say whether it is "the thing," or *vice versa*, only, as I said, to caution those who, perhaps, are a little too sanguine in their undertakings. I have been a little too hasty, at times, myself, the same as that grand old man, Dr. Miller, who owns up to being a little too sanguine at times (Page 135, *Forty Years Among the Bees*.) Let me quote his words: "Go slow."

If you are producing bulk comb honey, and it is a success with you, finding a market for all you produce, and are in a locality with a succession of short flows, stay right by it. On the other hand, if you are in a good, white, comb honey locality with a good flow, people always using comb honey, or perhaps, more properly speaking, "section honey," better "go slow;" or, perhaps, "if you don't watch out," you may find, like M. P. Cady, that it's no go.

In my immediate vicinity, or, I may say, in the State of Iowa, I never expect to see it make much headway; and I will make this assertion that it will *never* become popular with the *city trade*.

I would like to say, also, in passing, that there is the biggest chance for *deception* in bulk comb honey of any honey produced; and, for that very reason, if for no other, it will never become popular with commission firms, wholesalers, or any one buying in large quantities. What a *multitude* of sins a tin pail and a little extracted honey will cover up!

Study your market and your *location*, or, rather, your honey flow; notwithstanding, some say your location has nothing to do with it. If you are in a locality capable of producing a fancy white comb honey, "go slow." I said study your market. Yes—it's one thing to produce a crop and quite another thing to sell it—at a paying price. If you can produce a fancy article of section honey, don't ever worry about over production. The market is far short of the really fancy article. If you are in a locality where your honey flows are made up of short flows, and a variety of flavors, you could try bulk comb honey. You never could produce enough fancy section honey in a locality like that to pay you to bother with it. Fancy honey isn't produced under such conditions.

In closing, I would like to ask friend Wilder to explain a few assertions made in the January Review.

What insects are there (if any) in section honey that are not in bulk, comb honey? I have produced section honey ever since I kept bees, and never had any complaints of "insects" being in the comb honey and I didn't know there were any.

Why is bulk comb honey any more wholesome than section honey, or extracted?

Why is it necessary to have a special hive for the production of bulk comb honey? I thought any good extracted honey hive would answer. In fact, I've often thought we had more hives no

than was actually needed—if we only thought so. However, we don't all see alike.

Why can bulk comb honey be exhibited any more attractively than comb? When you get anything in the honey line that appeals to the eye and palate any more than snowy white sections of fancy comb honey you have got to go some.

A few more lines, and I say them in a friendly way, to all. It seems there is a disposition on the part of some to *boom* their end of the business at the expense of the other fellow. In Gleanings, some time ago, some one (and if my memory serves me right it was Dr. Bohrer) took a poke at the comb honey business by saying the bees expel poison over the combs, thereby poisoning the honey, and he put up quite a talk about it. It was easy to guess he produced extracted honey. Now comes friend Wilder and *infers* that our comb honey is "buggy," notwithstanding his bulk comb honey is composed in

part of practically the same thing. We must remember that others besides bee men read these articles. You all know about the comb honey canard. Don't put any more nonsense into the already suspicious heads. I said I had always produced section honey. I produce it because I have an ideal location, and because there is a fascination, about producing comb honey, a longing desire to produce something just a little better next year is hard to overcome; yet I wouldn't go on record as saying comb honey was more wholesome than either bulk, or extracted. It is just simply a matter of taste, that's all. Put your shoulder to the wheel, and push the honey business along. Produce a fancy article of either comb, chunk or extracted just as you locality seems to demand, and you don't need to worry about the other fellows.

CENTER JUNCTION, Iowa, Jan. 18, 1910.



EDITORIAL

He can who thinks he can.

Exhibiting and handling bees in a cage, at the same time giving popular lectures on bees, at the State fair, is something for which Mr. S. D. House, of Camillus, N. Y., receives liberal compensation from the Fair Association. It is not only educational, but it is a very good drawing card, attracting great crowds. It occurs to me that the right man might do some good educating the public, and at the same time make quite a little money, by making arrangements in advance with fair managers, and by going from one State fair to another, doing this very "stunt," that of handling bees in a wire cloth cage. The cage and bees could be shipped by express from place to place.

If I did not have so many other irons in the fire I would be tempted to give the venture a trial. It could be very nicely managed in connection with an apiarian exhibition such as I used to put up at the fairs.

How They Talk!

I doubt if any class of people can talk longer or with more enthusiasm, than bee keepers. To illustrate: Upon my recent visit to the hospitable home of Mr. S. D. House, a neighbor-boy of three summers dropped in, as was his frequent habit; after hanging around Mr. House and myself for a while he finally went into the next room and said to Mrs. House: "Auntie, how much longer are they going to talk?"

Italian Bees and Black Brood.

If there was any one point brought out with more emphasis than another at the New York conventions, it was the importance of having Italian bees in combating black brood. One inspector after another got up and stated with emphasis that it was simply impossible to cure black brood with black bees. The first step in getting rid of black brood is to introduce Italian queens to every colony. There are other important points, but as Mr. House is to take up the matter in detail next month, I will leave these to him.



Constant Watchfulness is needed in the bee business, let the management or system, be what it may. Mr. Townsend and others, advise feeding bees enough feed in the fall to last them to the opening of the harvest the next year, and it is good advice, but seasons and conditions vary greatly, and what is sufficient one year falls far short the next. We try to give our bees about the same amount of stores each fall, yet, the first year we had bees in Northern Michigan, or, rather, the first spring, we had to feed about ten barrels of sugar. The next spring they were short again, but, soon, cherry began to yield, and we did not have to feed. Last winter they consumed not more than half as much honey as usual, hence started in the spring with combs so full of stores that no feeding was needed. The man who takes it for granted that, because he fed his bees in the fall until all had a certain quantity, they will need no feeding in the spring, may meet with great losses. It is well to see that there is plenty of honey in the combs in the spring, also that some of this honey is in the central combs, as a prolonged cold spell may keep the bees closely clustered in the center of the hive.



Moisture in the Bee Cellar.

Walter Harmer, of Manistee, Michigan, writes that he is interested in the matter of moisture in the bee cellar. He asks

that Dr. Cowan tell him what ventilation was given his hives. Mr. Harmer says that with the covers left sealed down tight, there is condensation of water on the under side of the covers, and this furnishes water for the bees, so he ventilates by drawing the cover forward slightly. This does away with the moisture in the hives, but he finds it necessary to supply the bees with moisture. To do this he has sprinkled the floor, also the entrances and tops of the frames. Mr. Harmer says that he doubts if a cellar can be too damp if the temperature is high enough, and the hives well-ventilated; and I am inclined to agree with him. If the temperature is only high enough to warrant it, I believe that a damp atmosphere is really beneficial.



Moving Bees.

Only the man who has moved bees, especially by the car load, can truly appreciate the article in this issue by Mr. Cavanagh. Yes, and only the man who has "been there" could have written such an article. How it brings up old memories! It is terribly hard and nerve-straining work, yet, as he says, it has about it the spice of adventure. A large share of the pleasure in establishing our apiaries in Northern Michigan came from the adventurous nature of the undertaking.

How many excellent points he brings out. For instance, keep the smoker lighted, and don't let the different loads become "bunched," so that escaping bees from one load may attack the teams of another load. Then that improvised squirt gun—truly, necessity is the mother of invention.

Then there are the delays at junction points, especially in large cities, where there are hundreds of tracks, acres and acres of cars, and dozens of engines puffing here and there. All seems confusion, yet somewhere in the yard, perhaps perched up in a little coop of a building in the air, is one man who con-

trols all this chaos. If *he* says an engine shall take your car *at once* to some connecting line eight or ten miles distant, away you go. I have had a lot of this experience in going to State fairs, and I could always use the argument that I *must* be at a certain city the next day, or I would be too late to exhibit. One of the greatest difficulties in shipping bees by freight is the delays at junction points. I would never think of shipping a car of bees without going with them.

Ventilation of Bee Cellars.

A correspondent calls attention to a point that I have overlooked in describing our bee cellars and their management, and that is the amount of ventilation given. It is true that I said an opening about three feet square was left in the ceiling and this allowed the moisture to escape, but my friend says it would also allow too much heat to escape, and thinks that I must have failed to tell the whole story. Yes, I ought to have explained more fully on this point. We have a board cover larger than this opening, and cover up the opening according to the severity of the weather, the number of colonies, etc. At the beginning of the winter the opening is usually left open full size. So long as the temperature remains high enough, the opening is left uncovered. As the season advances and the temperature begins to drop, the opening is partly covered; the amount depending upon the conditions. At present (Feb. 1st) the opening in the cellar here at Flint is 1 x 3 feet. Towards spring, if the temperature begins to go up, the opening is again enlarged.

By the way, we often cover this opening with a piece of old carpet. This allows the moisture to escape quite freely, yet retains a large portion of the heat.

New York's Comb Honey Prize-Winner
to Write for the Review.

I have just returned from a trip to New York, where I attended two bee-keepers' conventions; also spent one

delightful day at the home of Mr. S. D. House of Camillus, N. Y., where I examined and photographed his hive, super and implements, and listened to his description, in detail, of the system whereby he produces his wonderful crops of comb honey—wonderful in quantity and still more wonderful in quality and finish. For fourteen years in succession Mr. House has been awarded first premium on his honey at the New York State fair; and such is the demand for it that he can virtually set his own price upon it. It is sold by the section, or crate, not by weight, but at present, it is netting him at the rate of 20 cts. a pound, wholesale.

In regard to the quantity produced per colony, here is a pointer: A neighboring bee keeper told me that he had heard so much about the big crops produced by Mr. House that, for two or three years, he had been going up there in June to see the honey on the hives, and it would surprise one to see the amount of honey in the supers before other bees had even made a start in the sections.

Mr. House's father was an expert bee keeper, and "S. D." was early pressed into the service, and has been in the harness ever since. At present he has over 400 colonies, located in three apiaries, doing nearly all of the work himself.

The Review has been blessed in the way of competent correspondents, but I feel that its readers were never more fortunate than when I secured the promise of Mr. House to write a series of articles on comb honey production.

I might say, in closing, that, with many other New York bee keepers, Mr. House has had to contend with black brood, or European foul brood, but he has not only conquered it, but secured crops of honey while doing it, and, that bee keepers may have the benefit of this knowledge early in the season, his first article (in April) will deal with black brood and its successful eradication, after which he will talk upon comb honey production.

Selected Articles.

AND EDITORIAL COMMENTS.

PREVENTION OF SWARMING.

A Radical Cure for the Swarming Habit of Bees.

The readers of the Review know that the copying of Dr. Jones' book on swarm-prevention was begun last month. Its principal feature is that of getting all colonies as strong as possible, then as the honey harvest comes on, and the swarming impulse is developed, all of the sealed brood, except two combs, is uncapped with a honey knife. Some of the advantages of this system were given last month, these are added to in this issue, and the author describes in a most graphic manner how, in a manner worthy of Sherlock Holmes, he reasoned out the plan that Mr. Davenport, or, rather C. Monette, refused to divulge.

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8th. The treatment will cure the swarming impulse after queen cells are built and capped over, and it will also prevent swarming if applied before the bees have made any preparations to swarm. Therein consists its great superiority over any and all known non-swarming methods. All other systems require to be carried out before the bees think of swarming. All plans hitherto advocated have been preventative and not curative measures. All authorities agree that their methods are not remedial methods and all admit that they do not know of any such method. The simple fact that it will cause the bees to destroy the queen cells after they are built and prevent their swarming out stamps it as being as far ahead of other methods as an express train is ahead of an ox team.

9th If you desire to re-queen you have on hand a nice lot of choice queen

cells raised under the swarming impulse. No occasion to search for a non-swarming race of bees; no necessity for trying to breed out the swarming instinct, for at all times you have swarm control right under your thumb.

Again, what are some of the disadvantages of this system? Objections, such as they are, are all of a minus quantity. 1st. Not adapted to the man who keeps his bees in the "invisible brood chamber hives," better known in common parlance as the straw skep, the box hive, the log gum and the proverbial nail keg. Neither the bees nor the man can see what is going on within the hives. Yet both the bees and the man seem satisfied. That kind of bee keeper seems to keep bees for the exercise and excitement he gets out of it chasing swarms, climbing trees and hiving swarms. The heat, sweat and stings make him think that swarming is the chief end of apiculture. Such a trifle as a honey yield is a minor consideration with him. 2nd. Cutting off the heads of so much sealed brood may seem a cruel, useless "slaughter of the innocents." Admitting for the sake of argument, that it is, does man hesitate to sterilize and weed out all inferior animals even though his methods involve pain and even death? All our methods of preparing animal food inflict cruelty and death upon the animal. Again, the brood beheaded, if it had been left undisturbed, would not have hatched out in time to help gather the harvest. The bees would arrive upon the scene at a time to become consumers and not producers. The unsealed brood, together with the newly laid eggs in the empty cells from which the bees have removed the brood, will hatch out in time to assist with the fall flow, if there should be one, and the colonies will go into winter quarters as strong as they would have been if the capped brood had not been destroyed. It seems the only way to knock the swarming impulse out of their head. Taking a few frames of brood away at a time or taking it all away at once and replacing it with empty combs or foundation will not cure the bees' im-

pulse to swarm. Cutting out of the brood will stop all swarming. It seems to require a heroic remedy to put a quietus on the swarming habit.

Instinct teaches the bee that its very existence depends upon a prolific queen and a well regulated and ample brood nest. As long as these conditions are present the colony works on in contentment, but as soon as the brood nest becomes crowded and there is no place for the queen to deposit her eggs, instinct teaches the bee that its existence is imperiled, and they become discouraged and swarm out to establish a new home. If the brood nest should sustain an injury in any way Nature teaches the bee to repair it at once. These instincts seem to be inborn and a part of the very nature of the bee. It appears reasonable to me that uncapping the brood would have about the same effect upon the bee in regard to its swarming out as we would be affected if we had made preparations for a journey and some giant would come along, tear the roof off from over our heads, destroy our furniture, kill our babies, and raise Cain generally. Our desire to travel would be squelched forthwith, and we would stay at home the same as the bees do. We might start in at once to repair the damage done to our home or we might give up in despair. Bee nature being built along different lines, at once applies itself to the wreck, and starts to repair the damage to its home. The dead are carried out, the cells are cleaned up and the queen has ample room to lay again. Everything in the economy of the hive goes on as before, the bees having no desire to swarm until the brood nest again becomes crowded, when Nature again asserts itself and they once more begin to make preparations to swarm. But the bees' thoughts are not my thoughts, neither are my thoughts the bees' thoughts, so if I have not interpreted their actions aright you have the privilege of giving a better explanation. One guess is as good as another as long as it cannot be demonstrated to a mathematical certainty. Admitting that bees do freak things at times, is it not a conceded fact that a colony of bees under normal conditions will not make preparations to swarm as long as the queen has ample room in the brood nest to deposit her eggs? And is it not also an established fact that when the brood nest becomes congested and the queen is restricted in her egg-laying, that then, and not until then, does the swarming instinct assert itself? Examinations of a colony prior

to swarming when queen cells are under way shows the outside combs full of sealed brood, eggs and larva, with honey in top and corners of center frames, the sealed brood predominating in the outer frames of the brood nest proper, and open brood in the center, and nearly every cell filled with honey, pollen or brood and no room for the queen to lay—an ideal condition to cause the bees to become discontented. Bees thrown into an abnormal condition will often swarm out; starvation swarms, colonies infested with worms and with their combs a mass of web, shaken swarms that have been bumped and banged and shaken out and compelled to establish themselves in a new home, thinking their condition could not be worse, in their discouragement swarm, and light out for pastures new. The condition of the brood nest cuts no figure with them, but be it remembered that they have been thrown into an abnormal condition, and the vagaries of bee nature under abnormal conditions is past comprehension. Given all other conditions that lead to swarming, minus a crowded brood nest, and there is no swarming. Natural swarming, shook swarming, caging the queen, all have as their underlying principle and do directly or indirectly relieve the congested condition of the brood nest. The Aspinwall non-swarming hive has as its leading feature the prevention of swarming by breaking up the solid brood nest. That is the one feature common to all methods of swarm-control. It resolves itself into what is the simplest, surest and safest method of accomplishing this end. As an easy, sure method, the uncapping brood plan stands in a class by itself.

Some of my bee keeping friends have requested that I give the steps that led up to the discovery of the treatment herein outlined. Being somewhat in doubt as to its being of sufficient interest to the reader, and also thinking that it might take up more space than this little booklet would warrant, my first impulse was to decline, but finally decided to give the details as briefly as possible. In order to do so will have to refer a little to "ancient history." I engaged in bee keeping on a small scale away back in the "seventies." Found the pursuit extremely fascinating, and soon had a bad case of "bee fever", on my hands. My enthusiasm did not develop into a mania for inventing a hive as is usually the case with beginners. In 1878 one colony was worked for comb honey, and the proceeds of that one hive netted thirty dollars. Kept them from swarming by

pinching off the queen cells—a procedure which worked satisfactorily in that particular case. That was the beginning of a non-swarming mania that has possessed me ever since. Wished then as I have thousands of times since that there was some safe, sure and easy method to prevent swarming entirely. A combination of circumstances made it necessary that I dispose of my bees, and active professional life and the want of a suitable location prevented me from again taking up the work for a quarter of a century. Since my first experience as a bee keeper until the present I have seldom talked with a bee keeper without winding up by asking him how he controlled swarming, and any article published on the subject always received careful reading. The very inception or rather the beginning of the train of thought that led up to the present treatment was due to an article that appeared in the American Bee Journal for March 1st, 1906, on page 185 and signed, "C. Davenport, Southern Minnesota." The writer stated that he had discovered a treatment that would absolutely prevent all swarming; that he gave a treatment that could be done in five minutes or less and in from one to fifteen days a second treatment requiring less than two minutes. He said that there was no hunting queens, no pinching of queen cells, and no bumping of hives around; that he had given the treatment to hundreds of colonies, and that none of them had swarmed; but he failed to give the treatment. In the same journal for July 12th, 1906, on page 602, he refuses to make his treatment known, and gives as his reasons that it would make bee keeping too easy and honey too cheap. Never having read an article on swarming that impressed me as that did, the matter kept "simmering" in my mind for days and weeks. Sought to discover the treatment he gave his bees by a process of exclusion, as medical men frequently do when they have a complication of symptoms, and are not just sure what ails their patient. Reasoned that the treatment that he gave his colonies must be one of two kinds—either medical or surgical. Medical treatment was soon excluded as being out of the question. Then it must, of necessity, be of a surgical nature. Surgical treatment of the hive was impossible, so the hive was eliminated. There then remained the queen, workers, drones, brood and possible queen cells to be operated upon. But he had stated that he did not even look for the queen or queen cells, so they were

excluded from being a factor in the problem to be solved. There now remained the workers, the drones and the brood to be treated. It being a self-evident proposition that he could not catch all of the drones or workers and operate upon them in five minutes, they too were excluded, leaving only the brood for a surgical operation of five minutes or less. To decide what surgical operation he performed on the brood was the hardest part of the whole proposition. Thought of cutting the brood out of the frames, but thought of the drone comb they would build if compelled to build a brood nest anew, and not knowing how to dispose of the brood after cutting it out, that idea was abandoned as poor surgery. Then I thought of mutilating the brood in some manner and also of uncapping it. The uncapping scheme looked the most plausible as I had somewhere read that in hives where there was an excess of drone brood the bees would immediately remove it from the cells if it was uncapped. Why would they not serve worker brood the same way? This treatment looked the most plausible of any that suggested itself, so I determined to try it out. The idea that the effect of the operation would be to relieve a crowded brood nest had not as yet dawned upon my mind. In due course of time I found a colony building queen cells preparatory to swarming out. I determined to uncap all of the sealed brood if it ruined the colony. In two days after uncapping the brood I made an examination of the hive and found the capped queen cells torn down, the young queens removed, and the bees made no further preparations to swarm that season. Candor compels me to say that they did not do anything else to boast of. Too much dwindling and not enough recruits to reinforce the workers. They built up in good shape and were strong in numbers for the fall flow. Did not try any further experiments on any of the colonies during 1906. When 1907 season was on, I operated upon two colonies, leaving some of the sealed brood to reinforce the workers. Again in 1908 tried the treatment upon a few colonies successfully, concluding before the season was over that two solid frames of brood in each hive was sufficient to make good the losses of the field bees. Not having enough bees at any time to give the treatment a thorough test, it was deferred until the past season (1909) to try it out. Will digress enough to state that my confidence in this treatment was further strengthened by an article written

by F. Coverdale of Maquoketa, Iowa, which appeared in the June number of the "Bee Keepers' Review" 1907. It was entitled "Controlling Increase By Cutting Out the Brood." He stated that:

"Any plan that rids the hive of all brood, kills all swarming just as effectually as if natural swarming had taken place." His plan consists in cutting out and removing all the brood, leaving the honey parts in the frames. Setting the brood in a box with a screen cone on one side and moved up close to the entrance of the old hive, the young bees hatched out constantly and reinforced the old hive. The cut out combs had to be spaced in the box so as not to touch each other, and enough bees run in to clean up the drippings and furnish heat for the brood. And this plan required further that enough honey be cut out with the brood to last until all the bees were hatched—the empty brood combs in the hatching box being finally melted up into wax.

The queer part of it is that Mr. Coverdale stumbled right over one of the most important discoveries of the last half century, but failed to recognize its possibilities. Further along in his article he makes this statement:

"To manipulate colonies so as not to swarm at all when run for comb honey is a thing yet to be discovered."

It read to me like another case of history repeating itself. While it is true that Langstroth was not really the inventor of the movable frame hive, he was the inventor of the first practical movable frame hive, a hive that was of real use to the world. To Huber, the Swiss, belongs the credit of inventing the first movable frame, but his invention was impracticable and not adapted to bee keeping on a commercial scale.

Without wishing to enter into any argument either for or against the Jones plan, I will admit that when I first read it there came over me a feeling of revulsion. It seemed cruel. The doctor, however, brings forward unanswerable arguments on this point. It probably is far less cruel than our treatment of some animals—dehorning cattle, for instance. It is possible, even, that it is entirely painless. I don't know as there is any way of determining this. Perhaps some of the scientists might determine this point. I don't wish to start a discussion until the entire book has been copied,

which will be next month, but I could not resist calling attention to the doctor's arguments on the point where his system may receive the most severe criticism. The rest of the book is devoted largely to a description of the author's experience with his method.

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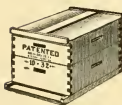
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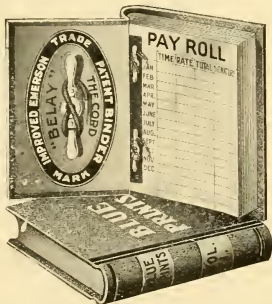
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We have a large stock on hand which means prompt shipment and our prices are the lowest.

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For shipping or storing extracted honey prevents leakage and taint from wood; being square, they are extra strong and economize space. 1 gallon cans, 10 in a box; 5 gallon cans, 1 or 2 in a box. Send for our estimate for 1909.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

Fiftieth or Golden Jubilee Year of the American Bee Journal

Better than ever. If not now a subscriber you will want it regularly. Most helpful aid to successful bee culture—52 pages, illustrated—\$1.00 a year. It tells all about the best way to manage bees to produce the most honey; with market quotations, etc. A dozen different departments—one for women bee keepers—Best writers

New Subscribers Only

Name.....

Postoffice.....

State.....

IT WILL INCREASE YOUR HONEY-MONEY!

If you will send us your name and address with Sixty Cents (stamps or coin) together with the coupon herewith, we will send you a trial trip of the Bee Journal for twelve months. Better order now. Sample copy free. Address

AMERICAN BEE JOURNAL

146 WEST SUPERIOR ST. CHICAGO, ILL.
2-10-71

— A full line of —

BEE KEEPERS' SUPPLIES

My patent section machine at half price. A new queen nursery and queen rearing outfit. Queens from imported Italian, Caucasian and Carniolan stock; also Adel queens. Send for catalog and price list.

CHAS. MONDENG,
160. Newton Ave., North,
North Minneapolis, Minn

4-08-71

Marshfield Sections,

Until further notice, \$4.00 per 1000 for No. 1. Best Dovetailed Hives, with Colorado covers, 8-frame, \$1.35 each; 10-frame, \$1.45 each. All other supplies as cheap. Berry baskets and crates kept in stock. Catalogue free. Address the Bee Supply Man of Central Michigan. 2-10-71

W. D. SOPER, Jackson, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.

HONEY WANTED—All grades, comb and extracted. 2,000 cases of buckwheat comb wanted at once. What have you to sell? Third car of water white sage just in. Write for prices.
12-09-71. GRIGGS BROS., Co. Toledo, Ohio.

Baby Chicks 8 cents each, shipped safely anywhere. All kinds fine poultry. Lowest prices. Booklet free.
CULVER POULTRY FARM
11 09-47 4079 Main Benson, Nebr.



"If goods are wanted quick, send to Powder."
Established in 1889.

Bee Supplies

Standard hives with latest improvements. Danzenbaker Hives. Sections, Foundation, Extractors, Smokers. Veils and a complete stock of Root's standard goods at factory schedule of prices. My equipment, my stock of goods and my shipping facilities cannot be excelled and I ship goods to every state in the Union. Finest white clover honey on hand at all times. I buy beeswax. Illustrated catalog of Bee Supplies sent free,

Walter S. Powder

859 Massachusetts Ave. INDIANAPOLIS, IND.

"DADANT'S FOUNDATION"

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

ITALIAN BEES and Queens and Supplies. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-111

Great Magazine Offer

I wish that every one of my subscribers were also readers of the Success Magazine, a 70-page monthly at \$1.00 a year. I have read it for years, and I know that a share of my enthusiasm, courage and perseverance have been gathered from its pages. A man's habitual frame of mind has much to do with his success, and the reading of Success will cheer, and inspire, and encourage, and arouse a man to successful efforts. I can offer the Review and Success one year for only \$1.75.

If you are reading none of the many most excellent magazines of the day, you are missing a great treat. Perhaps you regard them as luxuries. Possibly they are in some instances. They certainly help to fill out our lives, and give us broader views. They are like windows that allow us to look out over the wide world. This life is not one wholly of dollars and cents—at least it ought not to be. Enjoyment, pure and simple, enjoyed just for the sake of the enjoyment, is desirable and beneficial. To many there are few things more enjoyable than the bright pages of a really good magazine; and the Cosmopolitan is the one great magazine of all the great national monthlies. "The best—no matter what it costs," is its motto. The Cosmopolitan is \$1.00 a year, but I can send it and the Review one year for only \$1.75.

Combination Offer

The Review, Success and the Cosmopolitan are each \$1.00 a year, but I will send all three of them for only \$2.25. I will not make one cent on this offer unless I secure 100 subscribers to each of the magazines, when there will be a rebate of \$20.00. It seems as though I would secure that many at this price, but, if I don't, I shall be happy in having helped a few of my readers to secure some most excellent reading at a very low price.

W. Z. HUTCHINSON, Flint, Mich.

Life is short, why not enjoy it?

A Boomer Warm Air FURNACE

Will keep every room in the house comfortable. No home complete without one.

Feed-opening 13 x 18 inches

Burns knots and refuse wood successfully, and saves fuel bills.

We are experts in the furnace business, and will guarantee satisfaction. Write today for catalog and prices on a complete job.

The Hess-Snyder Co.

Massilon, Ohio

3-09-12t

You are a Bee Keeper

So am I

Then in that respect you and I think about the same. All bee keepers are nature lovers—and some are devoted students. Then you and I meet again in that class.

Therefore, as you and I are so much alike a magazine that I make in the fashion that suits me will fit you also. I make

The Guide to Nature

and will send you a copy for 10c. Then you can judge for yourself whether I am right in all these surmisings and theories.

Edward F. Bigelow

Apiarian Laboratory

Arcadia, Sound Beach, Conn.

2-10-6t

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

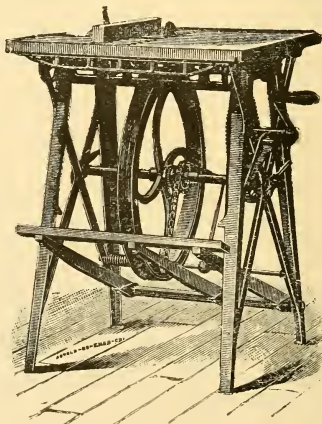
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

351 Ruby Street
Rockford, - Illinois



Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs un-even or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—No. 1 and fancy white comb wanted. We quote as follows: Fancy white, 16 to 17 cents; No. 1 white, 15 to 16 cents; white extracted, 8 to 9 cents; beeswax, 50 to 52 cents

BLAKE, LEE CO.
4 Chatham Row,
Boston, Mass.

Nov. 22, 1909.

KANSAS CITY—Receipts of comb honey are very light. Demand very good. We quote as follows: No. 1 white, \$3.50 per case of 24 sections; No. 1 amber, \$3.25 per case of 24 sections; white extracted, 7½¢; amber extracted, 7¢; beeswax, 25 to 30 cents.

C. C. CLEMONS & CO.,
Kansas City, Mo.

Feb 16, 1910.

DENVER—We quote our local honey market as follows: No. 1 white, per case of 24 sections, \$3.50; No. 1 light amber, per case, \$3.15; No. 2, \$3.00; white extracted, 7½ to 8½ cents; light amber, 6½ to 7½ cents. We pay 24 cents per pound for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASSN.
F. Rauchfuss, Manager.
Denver, Colo

Sept. 22, 1909

TOLEDO—The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½¢; No. 1 white, 14½ to 15½¢; fancy amber, 14 to 15¢; white extracted, 8½ to 9¢, amber extracted, 7 to 8¢.

THE GRIGGS BROS. & NICHOLS CO.,
Toledo, Ohio

Feb. 19, 1910.

CHICAGO—There is practically none of the best grades of comb honey on the market. Clean beeswax is also wanted. We quote as follows: Fancy white, 17 to 18¢; No. 1 white, 15 to 16¢; fancy amber, 12 to 13¢; No. 1 amber, 10¢; fancy dark, 9¢; No. 1 dark, 7¢; white extracted, 7¢ to 8¢; amber, 6 to 7¢; beeswax, 52¢.

R. A. BURNETT & CO.,
199 S. Water St.

Feb. 15, 10.

CINCINNATI HONEY MARKET—Extracted honey for the consuming trade, is moving as it has never moved before, owing to the comb honey market being bare; nevertheless the prices must remain stationary, otherwise the demand will shut off. We are selling strictly fancy, water white, table honey in 60 pound cans, 2 cans to the crate, at 9½¢ per pound; and a lower grade at from 8½ to 9¢. Honey in barrels from 6½ to 7½¢, according to the quality and quantity bought. We are paying 30¢ cash and 32¢ in trade for choice bright yellow beeswax delivered here. We would like to hear from people having comb honey to offer

THE FRED W. MUTH CO.
Feb. 16, 10. 51 Walnut St., Cincinnati, Ohio

NEW YORK—Comb honey is fairly well cleaned up; some small lots still arriving, but not large quantities. There is a fair demand for No. 1 and fancy white, while lower grades find very poor sale. We quote: No. 1 fancy white, 14 to 15¢; off grades, 11 to 15¢, according to quality; dark and buckwheat, 10 to 11¢. The market on extracted honey of all grades is rather quiet. While there is a fair demand, it is mostly for small lots, and in round lots, quotations are generally shaded. While there is no overstock, receipts are large enough to meet all demands. We quote: California water white, 8½ to 9¢; white sage, 8¢; light amber, 7 to 7½¢; amber, 6½¢, West India, 62 to 64¢, duty paid, per gallon; Southern, receipts are very light, and what little arrives sells at from 60 to 75¢ per gal., according to quality. Beeswax steady at from 29 to 30¢.

HILDRETH & SEGELKEN,
Greenwich & Murray Sts.
Feb. 19, 1910. New York City, N. Y.

WANTED—150 colonies of bees.
3-10-11 H. L. SOPER
112 Thompson Ave., Jackson, Mich.

For Sale Excellent bee location in Harrison Co., Iowa. Close to town, on good road, with rural free delivery and telephone. Lots of basswood and clover. 200 colonies of bees, also, if desired. No disease. Good honey house and caves. Favorable terms. 3-10-11
E. S. MILES, Dunlap Iowa.

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

Hives For Sale.

Until April 15.

In the flat,	one	five
One Story, 8-frame	\$1.25	\$5.75
Supers 4½ and 4 x 5	.45	2.00
Hive Bodies, and Frames	.75	3.50
Nailed and Painted	one	five
One Story, 8-frame	\$1.70	\$8.00
Supers 4½ and 4 x 5	.60	2.75
Hive Bodies and Frames	.95	4.50

Geo. E. Kramer, Valencia, Pa.
3-10-11

Root Automatic Extractors



- No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$23.00
- No. 27—Four-frame Root Automatic for frames not over 11 3/4 in. deep, 34 in. in diameter (weight 210 lbs.) 27.00
- No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00
- No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00
- GASOLINE ENGINE** with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of

labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



The A. I. Root Company, Medina, Ohio

APRIL, 1910



Flint, Michigan. \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 246.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Apr. 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Names of Bee-Keepers

TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand all arranged alphabetically (in the largest States), and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky..... 182	N. C..... 60
Ark.... 82	Kans.. 350	New Mex. 54
Ala.... 80	La..... 38	Oregon.. 106
Calif... 378	Mo..... 500	Ohio.... 1306
Colo.... 228	Minn... 334	Penn.... 916
Canada 1200	Mich... 1770	R. I..... 46
Conn... 162	Mass.... 275	S. C..... 40
Dak.... 25	Md..... 94	Tenn.... 172
Del.... 18	Maine 270	Tex..... 270
Fla.... 100	Miss... 70	Utah.... 68
Ga..... 90	N. Y.... 1700	Vt..... 205
Ind.... 744	Neb..... 345	Va..... 182
Ills.... 1375	N. J. ... 130	W. Va.... 178
Iowa.. 800	N. H. ... 158	Wash.... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of its members.

To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

President.

W. D. WRIGHT, Altamont, N. Y.

Vice-President.

LOUIS SCHOLL, New Braunfels, Texas.

Secretary.

N. E. FRANCE, Platteville, Wis.

Gen. Manager and Treasurer.

Board of Directors.

WM. McEVoy, Woodburn, Ont.

R. L. TAYLOR, Lapeer, Mich.

UDO TOEPPERWEIN, San Antonio, Tex.

R. C. AIKIN, Loveland, Colorado.

W. D. WRIGHT, Altamont, N. Y.

E. D. TOWNSEND, Remus, Mich.

JAS. A. STONE, Springfield, Ills.

G. M. DOOLITTLE, Borodino, N. Y.

R. A. HOLEKAMP, St. Louis, Mo.

R. A. MORGAN, Vermillion, So. Dak.

J. E. CRANE, Middlebury, Vt.

E. F. ATWATER, Meridian, Idaho

Annual Membership \$1.00.

Send dues to Treasurer.

Clubbing List

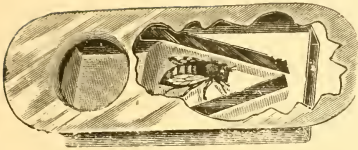
I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1 75
American Bee Journal, (new)....	(1 00).....	1.75
Canadian Bee Journal.....	(1 00).....	1.75
Ohio Farmer.....	(1 00).....	1.75
Farm Journal (Phila).....	(.50).....	1.20
Rural New Yorker.....	(1 00).....	1.85
The Century.....	(4 00).....	4.50
Michigan Farmer.....	(1 00).....	1.65
Prairie Farmer.....	(1 00).....	1.75
American Agriculturist.....	(1 00).....	1.75
Country Gentleman.....	(2 50).....	3.15
Harper's Magazine.....	(4 00).....	4.10
Harper's Weekly.....	(4 00).....	4.20
Youths' Companion..... (new)....	(1 75).....	2.35
Cosmopolitan.....	(1 00).....	1.90
Success.....	(1 00).....	1.75

IF YOU WISH FOR NEAT, ARTISTIC

Printing

HAVE IT DONE AT THE REVIEW OFFICE



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

EXTRACTOR FOR SALE.

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W. Z. Hutchinson, Flint, Mich.

Italian Queens

By Return Mail. Bright, Golden and Red
Clover Stock, Bred for Beauty
and Business

Select Untested in May, \$1.00 each, or six for \$5.00. Tested, \$1.50 each. After June 1st, 75 cents each; three for \$2.00, six for \$3.75 or \$7.00 per dozen. Tested \$1.00 each. Nuclei on two frames (Hoffman or Danzenbaker) with young queen in May, \$3.00; after June 1st, \$2.50. Safe delivery guaranteed. Circular for 1909 ready. Send for one, it will interest you.

Geo. W. Barnes

3-08-11

Box 340, Norwalk, O.

SAY! ARE YOU FROM THE SHOW-ME STATE?
 THEN WE WANT YOUR BUSINESS. BEE MEN WHO KNOW ARE THE BEE MEN
 WHO BUY FROM US. WE CAN ALWAYS SHOW 'EM THIS BUSINESS OF OURS
 IS BIG AND GETTING BIGGER BECAUSE WE HAVE THE SUPPLIES, THE QUALITY,
 THE SERVICE. AND--BEST OF ALL--WE ARE PRACTICAL BEE MEN OURSELVES,
 IN EVERY DETAIL. THAT'S WHAT FLATTENS OUT COMPETITION!

THE FRED W. MUTH CO.,
 The Busy Bee Men,
 Cincinnati, Ohio

(Soon as we get your postal request --
 Bing! -- into the mail goes a catalog to you.)

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.

Marshfield, Wis.

No Fish-Bone

Is apparent in combhoney when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,

Canajoharie, N. Y.

AS USUAL

Franklin, Tenn., Feb. 19, 1910.
Mr. G. H. Weber,
Cincinnati, Ohio.

Dear Sir:—Your consignment has arrived all O. K., and I find everything I ordered. I wish to extend many, many thanks for your promptness and fair dealing. All future orders will be sent to you.

Very truly yours,

W. A. MOORE.

I want you to notice four things in the above letter

1—The goods reached Mr. Moore O. K. We know how to pack carefully and securely, and without useless weight.

2—He found everything ordered. We carry large stocks always on hand, and our system of checking prevents annoying mistakes.

3—The advantages we have for prompt delivery are unsurpassed. If you want goods quick, send to Weber.

4—Fair dealing is now and always has been our motto.

Catalogs have been mailed to nearly all our customers. If you have not received yours send us a line, and we will get one to you by return mail.

C. H. W. WEBER & CO.,
2146 Central Ave. Cincinnati, O.

"Falcon"

Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.

Jamestown, N. Y.

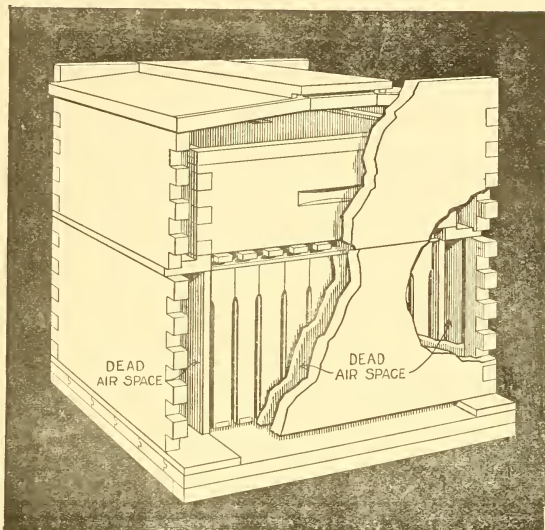
PROTECTION HIVE

All arguments lead to a matter of protection. Look where you may. Dead air spaces or packing, as you prefer.

The hive that is sold at less than the material in it will cost you at your local lumber-dealers, equally good stock being used.

Send us a list of goods wanted, and let us figure on Dovetail hives, sections, foundation, and all bee-keepers' supplies. We will save you money.

Special circular of Protection hive, and new 1910 catalog now ready.



A. G. WOODMAN CO., Grand Rapids, Michigan

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

Alsike Clover Seed.

Small and large red, Alfalfa and Timothy seed for sale. All recleaned and choice. Write for prices. Catalog of apian supplies free. Address F. A. SNELL, Milledgeville, Carrol Co. Ill.
3-10-2t

FREE, to Boys and Girls, Flexible Flyer, "The sled that steers." The best sled in the world. You can easily secure one within a few days by doing a little pleasant work. Some have in a few hours. Be the first in your town. Write today stating your age. A postal card will do. W. I. Davis, 155 East 24th St., New York City.

We will pay 30c a pound, delivered New York for choice quality pure

BEE SWAX

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Implements used by W. J. Manley in Rendering Beeswax

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

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W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, APRIL 1, 1910.

NO. 4

Rendering Old Combs Into Wax, With Great Ease, Speed and Perfection.

W. Z. HUTCHINSON.

MR. W. J. Manley, of Sandusky, Michigan, has perfected a method of wax making that deserves the above title. I visited him recently, and watched the *modus operandi*, then made a photograph of the paraphernalia.

The characteristic features of the plan are that of pressing only a small amount of material at one time, doing it very thoroughly, yet with such a system that one batch can follow another in rapid succession, pressing the slum gum under water that is boiling hot; releasing and re-applying the pressure, *a la* Hershisier; getting the wax up on top of the water, away from the slum gum and the burlap packing; then pouring the wax and hot water off into a cooling tank; and, last, but not least, drawing off the hot water from under the wax, in the cooling tank, and using this hot water over again for melting the next batch, thus saving the heating of another boiler of water.

First, let's describe the implements, or utensils. For heating the water he uses a common, six-griddle, cook-stove, with a reservoir. The old combs are melted in two, common wash-boilers. The one

thing that must be built with the greatest care is the press. He first tried presses sent out by manufacturers, only to meet with disappointment. They couldn't "stand the pressure." The outside jacket is 15 inches in diameter, 18 inches deep, and made of heavy, galvanized iron. Around the top, inside of the can, is bolted, very *solidly*, an iron hoop an inch and a half wide, and $\frac{1}{4}$ inch thick. Bolted to opposite sides of the can, at its upper edge, the bolts passing through the iron hoop just mentioned, are two strips of iron, $\frac{3}{8}$ thick, about 4 inches long, having one end turned outwards and formed into a hook that will receive a bolt $\frac{3}{8}$ of an inch in diameter. The cross-piece, above the can, through which passes the screw, is about four inches wide, and two and one-half inches thick, of hard wood, and reinforced by a piece of wagon tire iron half an inch thick and as wide as the piece of wood. Mr. Manley says that only the man who has been through the mill can realize the necessity for making everything very strong. The pressure that can be exerted with a screw is something

tremendous. In each end of the cross-piece is a $\frac{3}{4}$ bolt with a heavy nut on the lower end. When the cross-piece is put in place and swung around in the right direction, these bolts slip into the hooks already mentioned, the nuts catching below the hooks and holding down the cross-piece.

The next most important feature of the press is what Mr. Manley calls a "spider," which is put in an inch or two from the bottom of the can. The name is very appropriate, as it certainly resembles a huge spider with its legs fastened to the sides of the can. It is made of pieces of iron about 3-16 thick and one inch wide, bolted together at the center, and the ends bolted to an iron hoop that just fits inside the can and is bolted to its sides. This iron hoop is of the same size and weight as the one at the top of the can. Don't think that it will answer to rivet these hoops to the can. It won't. They will pull off. Use bolts, with washers on the outside, and have the washers thoroughly fastened to the can with solder. Even when all this care has been taken, Mr. Manley says that the screw-power must be used with discretion.

Fastened to the bottom of the screw is a plunger, or follower, made of heavy cast iron, and reinforced on the lower side with two layers of bars of wood; these layers crossing each other at right angles. Aside from the added strength, there is an advantage in having two layers of bars crossing each other. If the slum gum in its covering of burlap is forced up between the bars of the lower tier, there are still openings in the upper tier through which the wax can escape.

Perhaps half an inch less in diameter than the can, is an inner basket of perforated iron. Inside of this basket is used a sack of burlap for holding the slum gum. This, I believe, completes the description of the press, and I think I now better go back and tell how the wax is melted and pressed, and bring the process up to the point where the wax

leaves the press, before going further with any description.

First, the combs are all cut out of the frames, and the frames scraped clean, before any wax rendering operations are begun. After steam is up, and work begun, there is no time for cutting out combs. They are all cut out and thrown in a huge pile in one corner of the room, from whence they can be readily scooped up with a shovel and thrown into the boilers as needed. We will suppose that the combs are cut out, a good fire in the stove, and the two boilers and the reservoir full of hot water. The equivalent of about eight Langstroth combs is put into the boiler that sits upon the hottest part of the stove. As the combs melt they are stirred and thoroughly broken up with a large stick. When the wax has thoroughly melted, the perforated metal basket is set inside the press, the burlap sack hung inside the basket, and the contents of the boiler dipped with a gallon dipper into the burlap sack. That is, it is dipped at first, until the operator is able to pick up the boiler and pour out the rest of its contents into the burlap sack. After the melted combs and hot water are all in the press, the burlap sack is grasped with both hands, at its upper edge, lifted up somewhat, and twisted about, until the bulk of its contents has been reduced so that the top of the sack can be folded down upon the body of the sack. The screw and follower is then put in place and screwed down upon the sack. While this batch is pressing, the other boiler is filled with combs and set to melting upon the stove. The screw is then loosened, and the water allowed to enter the slum gum, when pressure is again applied, *a la* Hershisier. Before the follower is screwed down the second time, it is turned around part way, by means of an iron rod thrust down upon its upper surface. The bars upon the lower surface do not then go back into the same old grooves in the sack of slum gum. This loosening of the screw, and re-applying

of the pressure, may be repeated as often as thought advisable. It will be noticed that the pressure is applied under boiling hot water; that the wax rises to the top of the water as fast as it escapes from the slum gum; that it is not entangled nor retained by the burlap.

We will suppose that we have secured all of the wax possible by pressure. The slum gum is in the sack; the press is full of hot water, with the wax floating on top; Mr. Manley then pours off this hot water and wax into what might be called a cooling, or separating tank. The screw is then loosened and removed, the sack of slum gum taken out, and the slum gum shaken out into some old box or barrel. There is no wax, propolis, nor stickiness about the sack after it is emptied—just as nice and clean as when first put into the press.

This cooling, or separating tank, will probably hold a barrel. It is perhaps two feet high, and a trifle more than that in diameter. It is made of galvanized iron, with a gate or faucet at the bottom, and another perhaps six inches from the top. There is also a glass gauge in its side, through which can be seen the line of demarcation between the water and the wax. It will be seen that, from the lower faucet, hot water may be drawn from beneath the wax, leaving the wax in the tank, and using the water for melting the next batch of wax. This is one of the biggest points of the system, that of using the same water over and over again before it cools. Keep dumping the melted wax and hot water into this tank, and keep drawing off the hot

water from beneath the wax, as the water is needed. Some water will be lost by evaporation and some will be absorbed by the slum gum, hence the necessity of hot water in the reservoir to replenish the loss. The upper faucet is used to draw off the melted wax if the tank becomes too full, or at the end of the "run." A look through the glass gauge will show when the body of wax is at the right height to be drawn off. The lower surface of the wax ought to be a short distance below the faucet, so that little or no sediment will be drawn out through the faucet. If it is not quite high enough, boiling water can be added until the body of wax is at exactly the proper height. At the end of the day, or of the "run," the wax can be drawn off in this manner, simply leaving a little wax below the faucet. This thin sheet of wax can be allowed to cool in the tank; and, by this plan, all of the sediment for the whole day's work, will be in this one place, under this one thin cake of wax.

For thoroughness, rapidity, and ease of operation, I doubt if any system of wax-rendering can compare with this plan of Mr. Manley's. He says that he can render from 150 to 200 pounds in a day, depending upon the character of the old combs. While cost is not of so very great importance, the outfit is simple and inexpensive. Except the press, nearly everything can be bought at an ordinary hardware, and the press can be made by a tin smith. Mr. Manley says that his cost him about \$8.00.

FLINT, Mich., Feb. 4, 1910.



The Making of Home-Made Hives at a Low Cost.

J. W. Southwood.

FOR the most part my hives are of the eight-frame, Dovetail-size. I make no other. If I were producing extracted honey I think I would

use the ten-frame size. I formerly made my hives by hand, using a form to cut the sides and ends all of the same length. I used to halve-joint the corners so as to

nail both ways, but I soon abandoned this. I also formerly used soft pine, but, as that became so high in price, I now use what my dealer calls Arkansas, hard pine. He claims it is much softer than the Carolina hard pine, and not so likely to split or check when nailing. I now make my hives out of this class of lumber which cost me, last spring, \$2.25 per 100 feet. That which I bought last spring was of good quality, almost entirely free from knots. I have it cut at the factory, where it costs me 50 cents an hour. I have the lumber cut so as to simply nail the corners together like a dry goods box. I use the eight-penny box nails in nailing the hives, excepting at the top where the rabbet is cut; there I use six-penny nails. In nailing up 20 hives last spring there was not a nail that caused a check; and in nailing up these hives there was not one out of square, or in wind. I insisted and emphasized the fact that I wanted the cutting done accurately, and I got it well done.

I formerly used tin rabbets, but, years

ago, abandoned them; much preferring the plain rabbet.

For the covers and bottoms I use flooring of the same kind of lumber that cost me \$2.25 per 100 feet. It is so matched that it will work either side up. I have both the covers and bottoms cut the same length, then select for the covers pieces which are free from defects, and match them together, nailing a two-inch strip across each end, one on the upper and one on the lower side. This makes a reversible cover that has given me no trouble in warping. I also nail two strips on the under side of the bottom board, one at each end. I nail strips of plastering lath on the upper side of the bottom board for the hive body to rest on.

I give my hives two coats of white lead and zinc paint, and the covers never leak.

I find that by making my hives this way that they cost me much less than if I bought them of a factory, and, at the same time, I have a good, solid and accurate hive.

HUNTINGTON, Ind., Jan. 24, 1910.



In Combating Black Brood, Italian Blood is The Most Efficient Weapon.

S. D. HOUSE.



MUCH that is written of foul brood is lacking in helpfulness because the writers fail to designate the *kind* of foul brood, or neglect to emphasize the principle factor that has led to

success. There is a vast difference between black brood (European foul brood) and American foul brood; the former being more virulent and destructive, yet yielding to milder treatment. What I

have to say in this article will have reference to European foul brood.

About four years ago I discovered some diseased brood in a colony that had been purchased the previous autumn. The same day that I made the discovery, one of the inspectors called, pronounced it "very suspicious," and advised treatment by the shaking method. That evening, hoping to prevent any spread of the disease, the whole colony, bees, brood, combs and hive, was buried deep in the earth. But I was doomed to disappointment, as, during the season, eight more colonies showed the disease in a mild form.

The next spring my troubles began in

real earnest. By June 15th there were 160 diseased colonies in my home-apiary. I sent for inspector Mortimer Stevens, and he came accompanied by inspector Chas. Stewart. They pronounced it black brood in its worst form, and advised shaking off the bees, stacking up the brood to let what there would of it

greater part of them and doubled them up. A few were dequeened and given the Alexander treatment the second time, and those colonies cleaned up and stayed cured. Later experience has taught me that it was not the *second* treatment that effected the permanent cure, but the presence of *Italian* bees that were hatch-



View From the Front Porch of Mr. S. D. House's Home, Camillus, New York.

Across the valley lie the tracks of the N. Y. Central, over which pass 50 trains daily.

hatch, burning out the inside of the hives, and the melting up of the combs. They also advised Italianizing.

Having three out-apiaries, with no one to help me, the item of labor was an important factor; so I decided to give the Alexander plan a trial on part of them. I dequeened 40 colonies, and, 10 days later, gave each a ripe queen cell from healthy Italian stock. I did the work carefully, and was full of hope, but the disease appeared again with the second filling of the combs. I then shook the

ing out. If I had given them more time they would have cleaned up without the second shaking. The rest of the colonies in this apiary were shaken, the combs melted and the frames burned, but the disease reappeared, that same season, in some of the colonies.

The following season the disease appeared in one of my out-apiaries; also in a good many of the colonies at the home-apiary; even among those that had been shaken the previous year but not re-queened. Upon studying over the situa-

tion, I noticed that it was the *hybrid* and *black* colonies that did not *stay cured*, no matter what kind of treatment was given. There were some pure Italian colonies in all of the apiaries, and, with a single exception, not a single diseased cell had been found in them, even with diseased colonies all about them. This exception came from the giving of a comb from a supposed healthy colony that afterwards proved to be diseased. As a test, this colony was left undisturbed, and it cleaned up during the season, and has remained healthy since. I have witnessed several instances where a single colony of Italians has survived without care or treatment, in some farmer's small apiary; not even shown a trace of the disease, when the rest of the apiary of blacks or hybrids died with black brood.

WHY THE ALEXANDER PLAN HAS FAILED.

There has been much discredit given the Alexander plan of treating black brood, but I believe the failures have arisen not so much in the treatment, as in the *race of bees*. Let me give an illustration: Mr. Howard Mills of Syracuse had an apiary of 100 colonies of blacks. When the disease appeared in his apiary, he called in the inspector, who instructed him to shake off the bees, destroy the combs, etc., which was done at considerable expense, yet, the same season, the colonies became so badly diseased, again, that Mr. Mills destroyed all of them in the fall, and went out of the business.

Again: Mr. Irving Kinyon, of Fairmount, bought an apiary of black bees that were badly diseased. In the fall he dequeened and doubled up about 25 colonies, expecting to introduce Italian queens, but the dealer of whom the queens were ordered failed to furnish them, as the season became so far advanced that it was not safe to ship them. As a result, these colonies went through the winter *queenless*. In the spring the Italian queens were introduced, and those colonies *freed themselves* of the disease.

A few colonies showed traces of the disease in the second hatching of bees, but the Italian bees soon cleaned out the dead larva, and the disease disappeared entirely. I could mention many similar cases showing that there is more in the *strain of bees* (Italian) in combating the disease, than in any method of treatment.

There is one more point: Don't be alarmed if a few diseased larvae show in the second filling of the combs after introducing an Italian queen. Give the Italians *time*, and they will clean these out.

In a December (1909) issue of *Gleanings*, Dr. C. C. Miller has a very interesting article on black brood, or European foul brood. He mentions what he considers an important discovery, viz., a colony with a laying queen cleaning out the disease and becoming healthy. I agree with the Doctor on this point. Mention has already been made of an Italian colony into which the disease was introduced by giving it a comb of brood from a diseased (but supposed healthy) colony. I may say here that I even went farther than that. A brood chamber of diseased brood, from which the bees had been shaken, was placed on this colony, with no queen excluder under it, yet those Italians cleaned up the combs, and they have remained free from disease to this day. There was a honey flow on at the time, which is an incentive to cleaning up.

I shall have to differ from the Doctor, however, on the importance, or desirability, of getting rid of the disease with a laying queen in the hive. First, why prolong the existence of the disease? Second, no queen should be kept, any great length of time, that was in the hive at the time that the disease was contracted.

SOME ESSENTIALS OF THE ALEXANDER TREATMENT.

The Doctor mentions some points from Mr. Alexander's teachings. First, strength of colony; second, a period of queenlessness; and, possibly, the giving

of a virgin Italian queen. My experience would lead me to reverse the order of essentials as given by our good friend. The first essential (not always the first in manipulation) is the giving of a virgin, Italian queen. Next in importance is a period of queenlessness—third, strength of colony. It is possible to cure mild cases simply by the introduction of a virgin, Italian queen, but it is simply impossible to cure a colony of blacks and have it *stay cured*, without the introduction of an Italian queen. When the bees are not Italians, and the combs well occupied with dead brood, a period of queenlessness is quite essential. I have also found that the bees will clean out their combs much better when there is a virgin queen in the hive. This period of anticipation of egg-laying seems to inspire the bees to greater activity.

METHODS OF TREATMENT VARY WITH THE SEASON.

As to the most desirable treatment, much depends upon the time of the year. Those that show the disease in the spring, I would dequeen at once. If the disease does not show until just prior to the honey harvest, then I would shake the colony into a single section of a sectional hive. By the way, the sectional hive

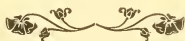
plays a very important part in the profitable management of a colony having black brood, enabling the owner to secure a crop of honey while getting rid of the disease. I will have more to say on this point in some future article. I would dequeen colonies that are to be treated after the white honey flow.

I have shaken colonies during the honey flow, tiered up the brood, destroyed the queen cells at the tenth day, given a ripe cell from healthy, Italian stock, then, later, selected the section that the bees were occupying the strongest, placing it, with the queen, at the bottom, with an excluder over it, and the other chambers above. The bees would clean out the combs, and later use of the combs, both as extracting combs and as brood combs, failed to resurrect the disease.

FORESTALLING THE DISEASE.

My bees have now passed through one season free from disease, and experience leads me to say to bee keepers, thoroughly Italianize your stock before the disease appears in your territory; you then have very little to fear from the disease. As one of the inspectors puts it: "Black brood is a blessing in disguise. It does away with the careless bee keeper and the old, box hive."

CAMILLUS, N. Y., Mar. 7, 1910.



Keeping Bees at Arm's Length—Producing Extracted Honey 67 Miles from Home

E. D. TOWNSEND.



IT was on the 1 morning of the 13th of August, 1909, that Arthur, my second son, and myself, started for our Perrinton bee yard, in Gratiot Co., to do the extracting of the year's crop of clover honey. Let it be known that not a drop of honey had

been taken from those bees up to that date; for we began extracting at that yard, the morning of August 14th, the crop of honey gathered during a part of the two previous months, and was all that was taken from that yard during 1909, for there is no fall flow of honey at this location.

Arthur and a student, Mr. J. E. Smith of Blanchard, Michigan, extracted this crop of 9,500 pounds of honey in four days, weighed it up in 60-pound cans.

and crated it for shipment. 3,000 pounds were extracted and put into cans in *one day*.

Each night a dray came out and took a load of honey to town, and stored it near the depot, ready to ship as customers were found who wanted it.

The extractor had just nicely started the morning of the 14th, when I had to hustle to catch the 10:06 a. m. train for Ashley, 11 miles further on, to finish harvesting the crop of comb honey, and do what extracting there was to do there, leaving the "boys" to do the work at the Perrinton yard, and what I tell you here is as the boys told me.

It might be well to state here that during the evening of the 13th and the morning of the 14th, mentioned above, I helped the boys 'get started,' and here the general plan of operation that will be described later on, was formulated. The arrangement of the honey house, the process of freeing the honey of bees and wheeling it to the extracting house, in fact, the whole procedure from the hive to the can was talked over, and the best methods adopted, considering the material we had to work with.

IT COSTS SOME MORE TO PRODUCE HONEY AWAY FROM HOME.

The distance between Remus and Perrinton by rail, is 67 miles, with two changes of cars. The connections are so poor that it takes about three-fourths of a day to get to our destination. After arriving at Perrinton, and making some necessary purchases, these and some freight that had been previously shipped, were loaded upon a dray and taken to the apiary, three-fourths of a mile out of town.

The dray had previously taken our 60-pound cans out to this yard, so everything was in readiness to begin the extracting, and nearly the whole day had been consumed in doing what could have been done in a few hours, had the bees been near home, where a horse is kept for this purpose. It costs some more to produce honey away from home, in our

out yards, than it does where the bees are all in driving distance from home. To offset this, one has the advantage of having his bees in locations where the flora is of a different kind, insuring a flow from *some* source each year.

It is a difficult thing to find an unoccupied location, where there are *good* locations for *several* yards near each other. There are many locations where a suitable place can be found for one, or, perhaps, two yards of bees, then perhaps, it would be necessary to go several miles before another paying location can be found. There are many "just ordinary" locations, but the point I would make is, it will pay well to go several miles and establish yards at some distant place, rather than accept and occupy those "ordinary" locations, with no excuse for using them, other than they are easy of access.

If one were producing both comb and extracted honey in out yards it would be well to produce the comb honey in the yards nearest home, and the extracted in those yards farthest away. The production of comb honey needs much more frequent visits than the production of extracted.

MUCH MORE WORK IN THE PRODUCTION OF COMB HONEY, THAN IN EXTRACTED.

Probably there is three times as much work connected with the production of comb honey, per yard, as there is in the production of extracted honey. Much of this extra work is shop-work, which can be done out of season, or rainy days, or at odd times, when one would not likely be at an out yard. Then there is the strenuous period during the last one-third of the honey flow, and a week or so thereafter, in the production of comb honey, that needs one's care almost constantly. How different in the production of extracted honey; for, one knowing his location well, then watching the season, and the honey flow, and when the honey season is two-thirds or three-fourths over, at the best of one's judge-

ment, no more upper stories are given the bees.

The Perrinton yard was worked on the "once a week" visit plan, during the honey flow. The season was a backward one, and the upper stories were given to this yard about the first of June. There were some of the colonies that were not in shape for upper stories at the first visit, but most of them were ready at the second visit, which was nearly two weeks later. It is noticeable that the first upper stories given to the bees, are the slowest being filled. This is accounted for by the fact that the beginning of the honey flow is usually rather slow; then there is the brood nest that is usually low in stores to be filled first. Colonies being accustomed to working in their brood nest, fill this before going above to any great extent; then, later in the season, when the bees become accustomed to working above, some of this honey that was stored in the brood nest at the beginning of the flow, is carried up, or used in breeding, so, at the close of the season, there may not be as much honey in the brood nest as there was soon after the beginning of the flow. Knowing this characteristic of the bees, also that the early part of the clover flow is inclined to be rather moderate, two weeks are usually allowed to elapse between the putting on of the first upper stories and the second visit. Then, a bee keeper must not be a *machine*, set to go at a certain time. The farm journals advise their readers to "mix brains with soil," *honey* is just a little better with some brains mixed in it; seems to give it a better flavor. Because it usually takes two weeks for the bees to fill the first upper story, is no assurance that this will be the case at all times. It may take three weeks for the first story to be filled, or the whole season, or it may take only a week. A good bee keeper is with his bees at this season of the year. While his bees are scattered in different locations, so the flow may be, and usually is, of a differ-

ent duration and amount, yet, if he is alert, and of the new school, he will have a way of finding out those different conditions in short order, and work accordingly.

My usual way of determining when the honey flow will begin, or how far it has advanced, or getting an idea when the flow will close, at a location at some other point from where I happen to be working, is to write some bee keeper in that particular location how things are coming. To illustrate: One season in Kalkaska county, the raspberry, the only source of honey, got frosted early in May. This freezing killed the early buds, and I realized that the honey flow would be retarded somewhat on that account; how much, no one seemed to know, not having had just such an experience before. This yard was 100 miles from home, and we did not care to make a trip up there until near the opening of the honey flow, so I asked Mr. Kirkpatrick, of Rapid City, Mich., who lives near this yard, to keep me posted on the condition and progress the berries were making. It was evident that the first part of the flow would be of a slow order, and if we knew the day that the berries began to yield honey, we could get to that yard in time to put on supers. This he did.

A CHAPTER OF QUALITY.

We will now return to the last visit to the Perrinton yard during the honey flow, this for the purpose of giving upper story room to those colonies that may need it. A period of dry weather threatened to cut the honey flow somewhat short. The cutting of the alsike clover for hay was well under way, and the indications were that the honey flow would not last more than a week—that the season for surplus honey was about three-fourths over. I should judge that one-fourth of the colonies in the yard at that time had their hives full and were in need of more room. There were others that did not have sufficient room to hold the honey that was likely to be brought in during the remainder of the flow.

Some twelve of the colonies had swarmed during the season, and were hived by a neighbor, so there were at this time 150 colonies in the yard. The 150 colonies had 245 ten-frame upper stories on at this visit. Something like ten of the colonies, on account of their swarming, or, for other reasons, did not need upper stories—that left 245 upper stories on 140 colonies. This is as they were left after a day's work with this yard, shifting stories around from colony to colony, until every colony in the yard needing room had it. Those that had swarmed, or, for any reason had more room than they were likely to use, their part-full stories were taken from them, and given to colonies in need of room. In shifting about upper stories in the yard, a considerable part of the bees are smoked out, sometimes as many as half of them are carried with the stories to the new location. Many of the bees thus removed will return to their former location, but, if some of these young bees do remain in the new location, no harm will occur, as, in this case, they are of as much use in one hive as the other. By thus shifting around the upper stories in this yard, rather than giving empty stories of combs to the third, or so, that would have needed them, much more of the crop of honey was sealed and finished, thus making a much better quality of honey.

Right here is where many "fall down," in the production of a crop of good extracted honey; as honey must be quite well sealed all through the yard, or the quality will be low. A poorer quality of

honey is likely to be produced in a season of nearly a failure, as with the best of management, about so much honey is left unfinished in each colony. That is, no matter whether a colony fills one, two, or more, stories with honey, one will be only partly full, as a rule.

It is evident that, the better the season, other things being equal, the better the quality of the honey produced.

In harvesting the crop, if anything like a fourth of the honey on the hives is unsealed, those unsealed stories are sorted out and extracted by themselves, the honey put in a grade by itself, and sold at a less price than our best grade. I now have reference to our best white honey for table use; the buckwheat, or low grades for manufacturing or baking purposes, is extracted in one grade.

The colonies at this yard averaged a little more than 70 pounds of surplus honey, each. The 245 upper stories of honey, averaged a little over 40 pounds of honey, each, at extracting time. This amount includes what was taken from the cappings later in the season, as will be explained later. Handled as explained above, with a dry season, so large a per cent. of this honey was sealed, and cured so well, there was no need of making two grades of it, the quality being good when all was extracted together.

Honey produced along these lines, is the kind that brings one or two cents per pound above market price, with a ready sale.

REMUS, Mich. Feb. 5, 1910.



Is One Branch of Bee Keeping More Honorable than Another?

J. E. HAND.

MR. Editor:—Your editorial in the January Review on changes in bee keeping touches upon a subject of vital importance to bee keepers

in general, and to the readers of this journal in particular; a subject that has caused me no little anxiety as to the future status of bee keeping.

Your statement that a majority of the extensive bee keepers are engaged in the production of extracted honey, and that their ranks are being continually swelled by deserters from the ranks of comb honey producers, reveals a condition that is deplorable in the extreme.

When a powerful and influential bee journal comes out with flaming editorials, setting forth in glowing terms the fact that more money can be made by "keeping more bees," and producing extracted honey, its editor throwing his strong personality and irresistible eloquence into the scale as only the editor of the Review can do, it is not to be wondered at that the poor comb honey producer, who has become almost discouraged in trying to solve the problem of swarm-control, allows the prospect of present gain to blind his eyes to the glory of future achievements along the lines of solving knotty problems that obstruct all the avenues that lead to successful comb honey production on a large scale, and looks with tired eyes, towards the ranks of the enemy upon whose starry banner is written, in letters of gold, "keep more bees and produce extracted honey," wavers, and is lost.

When such a condition exists in the ranks of bee keepers, the noble structure that was erected as a monument to the founders of comb honey production long ages before the extractor was known, is shaken to its very foundation, and, unless there remains a small remnant of faithful ones, it will soon be as Sodom and like unto Gomorrah, and the noble science of comb honey production, its banners trailing in the dust, will be chained in the darkest dungeon, when our beloved pursuit will be represented by a band of "honey slingers," with little regard for the instincts of bees or the laws by which they may be so easily controlled.

SWARM-CONTROL THE ONE THING LACKING.

This whole difficulty lies in the one simple fact of man's inability, with all his boasted wisdom and superior intellect,

to control the swarming impulse of bees with economy of labor in the production of comb honey, on a large scale. Every bee keeper knows that with this problem once solved, comb honey can be produced cheaper than extracted, and with the difference between the price of these two commodities it is so easy to see which will yield the greater gain.

The editor's statement that extracted honey production under existing conditions is more profitable than comb honey, while *true*, amounts to but little when weighed in the balance with the possibility, yea, with the *certainly*, of future gain by solving the problem of perfect control of bees.

It seems unavoidable that a change should come at this time, from comb honey production, but woe unto him through whom the offence cometh, for such an unnatural condition cannot long exist in an enlightened land.

THE EXQUISITENESS OF COMB HONEY.

What is more strikingly artistic, sublimely beautiful, and exquisitely delicious, than a section of white comb honey in its virgin purity, fresh from Nature's laboratory and bearing her seal, which is a sure guarantee of purity, uncontaminated by contact with the many open vessels through which extracted honey must pass ere it reaches the consumer's table. Show me the bee keeper who would stand before an enlightened audience and say that extracted honey can take the place of comb honey. The idea is simply ridiculous.

ARTIFICIALLY RIPENED EXTRACTED HONEY.

Honey extracted from the comb and ripened in open vessels loses its essential oils by evaporation. All of this flavor is retained in comb honey by Nature's air-tight seals; and such extracted honey can no more be compared with comb honey than can sorghum molasses be compared with extracted honey.

It is my candid opinion that those who allow the prospect of *present* gain to en-

tice them to desert the ranks of comb honey production will, ere long, have good cause to regret the move. A rolling stone gathers no moss, but little is gained by changing from one thing to another.

CAN SPECIALTY BE MADE TOO SPECIAL?

I believe in specialty with all my heart; I also believe in keeping all the bees one can properly care for, but when the editor of an influential bee journal, both by example and by precept, makes a specialty of a *single branch* of honey production, to the utter neglect of a more important one, he is pushing specialization to the utmost extremity. He is, perhaps unconsciously, allowing his zeal for the cause of extracted honey production to lead him into a rather narrow channel.

A bee keeper who would do credit to his chosen profession should be able to produce both comb and extracted honey at a profit, otherwise he is only half a bee keeper; and the *smaller* half if he can produce only extracted honey.

REALLY MORE PROFIT IN EXTRACTED HONEY.

As before stated, the fact that there is more profit in extracted than in comb honey production, proves conclusively that there is something radically wrong in our present methods of bee keeping. What is the remedy? Shall we shirk our duty and join the ranks of extracted honey producers, thereby creating an over production, and cheapen that commodity, or shall we, as valiant knights of the noble order of comb honey producers, plant our guns and stand by them until victory crowns our efforts with success and the last obstruction is swept from the pathway of the comb honey producer? The obstacles are by no means insurmountable. The goal for which we have so faithfully and earnestly striven is already in sight. The future of comb honey production never looked brighter than now. Yes, Mr. Editor, a change is coming speedily, but not in the

direction indicated by the editorial mentioned. Bee keeping methods are not progressing *backwards*.

WONDERS TO COME IN THE FUTURE.

Principles hitherto unknown will soon be incorporated into present methods; principles having in themselves a wider scope of efficiency than any that have ever yet dawned upon the horizon of modern bee keeping methods, thus forming a combination so vast in its scope of efficiency as to be almost incomprehensible; so sweeping in its power for economizing labor, yet so simple in its equipment, as to completely "revolutionize bee keeping methods."

Problems that have baffled the skill of inventors for half a century will sink into utter insignificance when these principles are applied. Results that have been only partially gained by an almost endless routine of hive and frame manipulation will soon be accomplished in the highest state of perfection, almost automatically.

The last obstruction will soon be swept from the pathway that leads to successful comb honey production on a large scale in out-apiaries. It will soon be the privilege of every bee keeper in the land to enjoy the blessings of perfect control of bees to his utmost capacity, as well as to his financial prosperity. You ask when that time will be and whence cometh these great blessings? The answer is "watch and wait," and, meantime, strain every energy you possess in as earnest an endeavor to solve this problem as you have to place the noble science of extracted honey production upon a pedestal so high as to command the gratitude and respect of every producer of honey, and, my word for it, bee keepers will not have long to wait.

HOPES THAT THE REVIEW - EDITOR WILL BECOME A LEADER IN COMB HONEY PRODUCTION.

I note with the greatest pleasure, by an editorial in the February Review, that

your zeal for the welfare of extracted honey producers, as well as for the future status of comb honey production, is being weighed in the balance. As a comb honey producer I await your decision with the utmost confidence that it will be rendered with due deliberation, and meted out with justice and equity to the producer of both comb and extracted honey alike, and with such a leader at the head of the great army of comb honey producers, who shall gainsay what is herein predicted?

BIRMINGHAM, Ohio, Feb. 5, 1910.

[The foregoing article is exceedingly well-written, and I greatly enjoyed its perusal. I count its author as a progressive bee keeper, and one who understands, better than most men, the capabilities and possibilities of the sectional hive. I have had a lot of correspondence with him, and visited him in his own home, and esteem him as a friend; although I don't always agree with his views. When he sent the above article he said that he wished that I would print it *verbatim*, and, with the exception of a few minor corrections, such as must be made in most of the articles that come to the Review, it is given exactly as written. I told my friend that I should be glad to give it space, but I should take issue with him on some points, and he replied that that was exactly what he wanted.

I feel like writing a long editorial on this subject, and I may do so, but my position can be told in these few words: I don't feel that one branch of bee keeping is any more honorable than another; I see no reason why the producer of comb honey should hold his head any higher than the producer of extracted honey. It has been said that the production of comb honey calls for more skill. If *skill* is to receive the crown, then the laurel must be twined about the brow of the scientific queen breeder.

In gaining a livelihood, man naturally, and sensibly, seeks the line of the least resistance. If he can make more money producing extracted honey, the

producers of comb honey may shout themselves black in the face, calling upon him to stay by them, and it will be of no avail. If it has reached the point where the production of comb honey must be *defended*, where bee keepers must be cheered and encouraged to induce them to stand by it, it certainly is in a bad way. I don't incline to that belief. This matter of which to produce, comb or extracted honey, has been threshed over, time and again, in the journals, and at conventions, and the decision has always been that it depends upon circumstances. Following this, comes the fact that conditions change; and where the production of comb honey was once the more profitable, we now find that the bee keeper who cares to do so, can make more money producing extracted honey. As explained in former editorials, the demand for extracted honey has increased, and methods have been studied out whereby several apiaries may be managed with comparatively little labor in its production, and large quantities of this kind of honey produced at a small cost, and I see no dishonor nor disgrace, nor even condemnation, for the men who take advantage of these conditions. In fact, I think that the Review would be lacking in duty and usefulness did it fail to point out these changes.

There probably always will be places and conditions where the production of comb honey will be more profitable, and, as editor of the Review, I would be a failure did I neglect this branch of the industry. To illustrate: I took a trip to York State last winter almost solely to visit one of her most noted comb honey producer, Mr. S. D. House, and learn his methods and secure his services as correspondent for the Review.

I feel that any bee keeper has a perfect right to make a specialty of either comb or extracted honey production, or of queen rearing, or the raising of bees to sell, and no one has the right to point the finger of scorn at another because he is in a different class.—EDITOR]



EDITORIAL

"Keep your troubles to yourself;
Put them on the upper shelf."

Keep an eye on the main chance.

A Gold Medal was awarded C. W. Higgins, Wapato, Wash., at the recent A. Y. P. Exposition, Seattle.

H. C. Ahlers, of Wisconsin, is now in Louisiana, and will ship home a car load of bees (300 colonies) May 1st.

Connecticut bee keepers will hold their 19th annual convention at 10:30, Friday, April 8th, 1910, in Banquet Hall, Y. M. C. A., Hartford, Conn. No evening session. This is to be an important meeting, and a large attendance is desired. Plans for the fall honey exhibit will be discussed. Come and join hands with those who are striving to promote the interests of every bee keeper in the State.

Jas. A. SMITH, Sec'y.

The Michigan State Bee Keepers' Association dues were raised this year to \$1.50. Of this 50 cts. per member goes to sustain membership in the National Association. This leaves \$1.00 per member for the use of the home Association, which is none too much. I have often thought that the Association was hampered in its work by lack of funds. This has now been remedied, and, with the energetic Secretary that we now have, things will hum the coming year. Let other Associations go and do likewise.

An Appendix to the Jones Book.

Since I wrote the comments following the copying of the Jones book on swarm-prevention, the author has gotten out a new edition, to which he has added an appendix. The gist of the new matter is

that some of his friends have prevented swarming by simply cutting out the drone brood and the queen cells. I agree with the Doctor in thinking that it might be effective if there were considerable drone brood, but, if there are only a few scattering cells, as is often the case, there would be swarming unless some of the worker brood, also, was uncapped.

Qualities that Make for Success.

No great success can be hoped for without courage, persistence, enthusiasm and resourcefulness. In addition to these, there is such a thing as the *habit* of success. A man possessed of these attributes can undertake and carry forward to success an enterprise that would fail in the hands of one less favorably equipped. Some men don't recognize such a thing as failure. They have such a masterful way of meeting and overcoming obstacles, as to *compel* success under almost any conditions. The man who "wonders if he will succeed," who will "try it and see how it goes," is quite likely to fail. His mental attitude favors failure. Not so with the man who *knows he will succeed*. Study the situation carefully and thoughtfully; let the decision be a wise one; but, once it is made, never court failure by doubting.

Fortunately, these success-attributes are capable of cultivation.

Gross and Net Weight of Honey Packages.

The question is often asked as to whether we should weigh in the package, and count it as so much honey, or should the package contain a certain amount of honey, net weight? The first year that we produced extracted honey in large quantities, we weighed in the 60-pound tin cans, putting in about 58 pounds of

honey. We supposed that was the usual practice; but we received so many complaints, that the time spent in correspondence in trying to straighten out matters was worth about as much as had been gained. Since then, we have put in 60 pounds of honey. I was talking on this point last fall with an extensive producer of extracted honey, and he defended the practice of weighing in the can. He said the producer had to buy this package, and, unless he weighed it in, he received no pay for it. It was worth something to the purchaser, and he ought to pay for it. He cited lard and other goods put up in packages, as being gross weight.

I think it really makes little difference which practice is followed. In any event the producer must get his pay for the package. If he weighs it in he gets his pay for it. If he puts in a certain number of pounds, net weight, then he must charge more per pound for the contents. Which practice shall prevail depends somewhat upon circumstances. I doubt if any product is sold in large quantities, at wholesale, and the package weighed in. No dealer in honey would buy a barrel of honey, and weigh in and pay for 50 pounds of barrel. The same way with a barrel of sugar, lard, etc. But when it comes to putting up these commodities for the retail trade, I think the usual practice is to weigh in the package. Take the breakfast foods, for instance, I believe that the packages are weighed in. The packages must be paid for, and it is likely that this practice secures the object with the least friction. It is not a question of honesty or dishonesty, unless there is an attempt to lead the purchaser to believe that he is getting net weight, when it is gross. It is largely a matter of what is the usual practice; but it ought to be made as uniform as possible. If it is understood that honey by wholesale is to be net weight, and retail packages are to be weighed in, it might simplify matters somewhat.

An Explanation Needed.

Recently, in looking over the report of the Sioux City convention of the National, I came across a place where Bro. York, of the American Bee Journal, attributed the slim attendance at some of the meetings to a lack of work on the part of the Secretary. In part, he said:

The last three meetings, in a measure, have been very poor as to the program. At the San Antonio meeting the Secretary was not present and neither a year ago nor this year. That certainly is not right. We have a membership of 3,500, and still in the past three years we have not had a secretary who has wholly done his duty. That is pretty plain talk, but it is true. It is a shame in a membership of that size that we cannot find someone who will do the duty of Secretary as it ought to be done.

It is probable that, in part at least, Bro. York is in the right, and I stand ready to manfully bear any deserved criticism, but I am at a loss to see how these strictures can be applied to the Detroit meeting.

As early as March, a full page cut showing the place of meeting was sent all of the bee journals, accompanied by an article setting forth its advantages; and, from that time on, until the convention was held, very few copies of any bee journal appeared without some item of interest, regarding the coming convention.

In making up the program, all of the officers of the Association were consulted, the great mass of bee keepers were appealed to through the journals for suggestions, and many leading bee keepers were consulted, privately, in regard to topics and men to handle them. I gave the matter my best thought and effort. The program appeared in all of the bee journals, besides being printed in pamphlet form and mailed to all of the members.

The amount of time and thought that I gave in promoting the interests of that convention were worth, to me, at least, many times the salary paid, but it was a matter of pride, and love for the Association; and, when it was all over, it was

very gratifying to hear the "Well done, good and faithful servant," in the shape of the following:

Also, be it Resolved, That our Secretary, Mr. W. Z. Hutchinson, be given a vote of thanks for his untiring efforts in behalf of the Association and its Convention.

In view of all this I am puzzled to know why Bro. York should assert that the Detroit meeting was "very poor as to program," and, still further, that I "was not present at the meeting." I am satisfied that Bro. York would not knowingly misrepresent, and I feel sure that he will be glad to correct and explain.



A Peculiar Location and Management.

The publication in this issue of Mr. W. J. Manley's method of wax-rendering reminds me that his location is decidedly out of the ordinary. Years ago that region (Sandusky, Sanilac Co.—up in the "thumb") was, for miles and miles, one vast swamp. Great drains finally allowed it to be made into the richest of farming land. How the white clover did luxuriate in this rich, alluvial soil. It grew in a perfect mat. Mr. Manley says that it sometimes reminded him of one vast white carpet rolled out over the fields. A yield of 100 pounds per colony was almost an assured fact. Then the autumn was gorgeous with goldenrod, aster, wild sunflower and boneset which yielded equal to the clover. Two hundred pounds of extracted honey each year, per colony, was the usual yield. The honey flow lasted until cut off by late frosts.

All this was very enjoyable, but there were shadows in the picture: This late-gathered, fall honey was almost sure death to bees in winter. Many plans were tried, but the results were nearly always practical failures. Failure in wintering has finally been looked for as matter of course. Extracting the honey and feeding sugar has not been tried. Mr. Manley thinks it would prove a success, but, under the existing circumstances, he doubts if it could be done

with profit. In the spring the combs containing honey are melted up, and the honey sold to the bakeries. The combs are all rendered into wax. Not only this, but Mr. Manley goes out and buys hives of combs all over that part of the country, getting them at a low price, and rendering them into wax. One spring he made and sold nearly \$1,000 worth of wax. In May he goes out beyond the swamp region, into the higher country, and buys bees of farmers, at a low price. He cares not what kind of hives they are in. A box hive can be turned upside down, a queen excluder put on, and then the supers stacked up on top. Mr. Manley says that just as good a yield may be looked for as from the finest hive ever made. Any swarms that issue are hived, but no honey is extracted until the close of the white honey harvest—then again at the end of the fall-flow.

Mr. Manley says he will let the other fellow raise the bees, *he* will raise the *honey*. He says that, when he can put \$400 into bees in the spring, and pull out \$1,200 in the fall, he considers it safe and sane bee keeping, even though he does not winter the bees.



When Spring-Protection is Needed.

I have for a long time argued in favor of spring-protection for bees, even if wintered in the cellar, but I must admit there are springs when the bees seem to do just as well without protection. It is some expense, and quite a tiresome task, to "paper" hives in the spring, and, if it can be avoided, so much the better. There is still another point, and that is the color of the paper used. *Black* paper absorbs the heat, and makes the hives unusually warm in the day, sometimes enticing the bees out of doors in unseasonable weather. I think Mr. E. D. Townsend has had as much experience in this matter as any bee keeper in this country, and, when I visited him last winter, we went over the different points pretty thoroughly. I suppose I

might have given our conclusions myself, but I decided to ask him to mention the most important points in the fewest words possible, and here is his reply:

In papering hives for spring-protection, we have come to the following conclusions: First, *bees* need no outside-protection in the Northern States during the months of April and May. Second, the only object of papering hives in spring is to protect the brood during cold, freezing weather; notably, at that period (occurring in May in this location) when the colony is low in number of bees; and *heavy with brood*. If a cold spell comes on at this period, the cluster contracts (unless the colony is protected in some way other than by a single-walled hive) and the outside brood is chilled and lost. This condition sometimes not only brings about the loss of the brood, but subsequent swarming-out, thus the loss of the colony. Third, that a colony needs no protection, other than afforded by the single-walled hive, except after a period of, say, two weeks of fine weather, when

the condition has been such that the hive is filled with brood to a greater capacity than the cluster can cover; this period occurring early enough in the season so that there is a likelihood of cold weather following, with the consequent loss of brood. Having come to this conclusion, we now defer papering *until this condition occurs*. About two out of three springs, in the past few years, bees have not bred up to any very considerable extent until nearly May, and, by the time their combs were beginning to be crowded with brood, the season was so far advanced that there was no danger from freezing nights, so papering would be of little use.

White paper absorbs enough heat when the sun shines, and is just as warm at night, or when the sun does not shine, so we use the white.

The above suggestions on papering for spring protection are intended for normally strong colonies; "weaklings" or "puny" colonies, are benefited by papering during the breeding season of spring, almost any year.

Selected Articles.

AND EDITORIAL COMMENTS.

SEALED STORES FOR SPRING.

They are a Good Thing, but it is Possible
to Have too Much of Them.

In a way, the sub-title of this article sounds just a bit like sarcasm—to me. But listen to a good Canadian brother, Mr. F. P. Adams, who writes as follows in the Canadian Bee Journal:

There is some difference of opinion as to the quantity of honey a colony of bees should have in the spring in order to build up successfully.

The late E. W. Alexander stated that he would prefer to have the brood chamber nearly empty when the first fresh honey came in, while many good bee keepers think that it is a sign of prosperity if there are several combs of sealed stores in the hives when brood rearing commences.

There is no doubt that this capped honey helps out in feeding the brood, but its presence in the hives at this time is a serious detriment to the growth of the colony. I have frequently seen a good queen greatly hampered in her egg-laying by the presence of capped honey at the tops of the frames and in the frames at the outside of the hive, and it is quite possible to have the frames in the hives so filled with honey in the spring that there is no chance of a colony getting in good shape for the harvest.

This condition is often brought about by a late fall flow or by heavy feeding to a colony on its full set of brood combs.

Any ordinary colony will winter well on six Langstroth combs, well filled with honey or sugar syrup, and by contracting down to this number and filling them up well, the honey or syrup is in the best shape possible to be used by the bees.

When brood rearing is well advanced in the spring the empty spaces can be filled out with empty combs and the

queen given a better chance to go ahead with her egg-laying.

I would much prefer empty combs on the outside of the brood nest in the spring with a good feeder on the hive, to several solid slabs of honey in the brood nest.

Bees will not use up sealed stores for brood rearing to any extent, and the presence of this surplus honey in the hives is no indication of prosperity. It is rather the reverse.

The finest combs of brood that I ever saw were in empty combs given to fill out. In them the queen could lay unhindered by honey and they were filled right out with brood, all nearly of the same age. Such a condition is not possible in combs that are partly filled with honey when the queen commences to lay in them.

Few people realize how a good strong colony of bees will boom ahead under the stimulus of regular feeding in the spring, and at this time sugar syrup regularly fed is of ten times the value of capped honey to the bees.

I expect that it is *possible*, sometime between the end of winter, and the opening of the main harvest, to have too much sealed honey in the brood nest, but in all my years of bee keeping, I have never seen such a condition; while I have seen many, many instances where there was a decided loss from a lack of sealed stores. Possibly, my system of management may have had something to do with it. At the end of winter, that is, very early in the spring, nothing is gained, and much may be lost, by the development of large quantities of brood. Brood rearing uses large quantities of stores, and, as the season advances, more and more honey is used for brood rearing, thus continually giving added room. I don't dispute that there *might* be too much sealed honey in a hive to allow for the development of the greatest quantity of brood; and, in such a case, I should, of course, advise its removal, but I think that the reverse is true ten times where this happens once. I remember when visiting Mr. J. P. Moore, the veteran queen breeder of Kentucky, and he told me that they usually had a good flow of honey in the fall from asters, and he

usually saved about two full combs of this honey for each colony to use in the spring to stimulate brood rearing. In April or May these two combs were given, one at each side of the brood nest, next the side of the hive: "and, I tell you, you just ought to see how those colonies will shell out the bees," was his comment. This has been my experience. Mr. Townsend says: "never let the bees feel the want of stores." I know, of course, that Mr. Adams does not advise that, but I believe that where one man has too many sealed stores in his hives in the spring, ten men don't have enough. I will admit, though, that this is no excuse for the tenth man.

I expect that the regular feeding of a syrup is more stimulating than the presence of sealed stores in the hive, but I doubt if it is much greater than would be the uncapping of some of the sealed stores already in the hive. I have several hundred of the Alexander feeders, quite a lot of the Heddon feeders, some Miller feeders, and have used them more or less for several years, and probably will continue to use them. I certainly will if I find it necessary, but if I always had an abundance of sealed stores, I would *never use feeders*. As I have just said, if stimulation is needed, it can be secured by uncapping the honey.

SAVING WEAK COLONIES.

A Sure Plan, and Probably as Good as Any.

There is seldom an apiary in the spring that does not contain at least a few weak colonies. What shall be done with them? Shall they be united, or strengthened from other colonies, or left to paddle their own canoe, as best they can? The Alexander plan is that of setting the weak colony over a populous one. If the weak colony is to be strengthened by drawing upon the resources of the strong, I am rather inclined to think I

would prefer the plan given in *Gleanings* by J. L. Byer, of Canada. It is as follows:

At this season of the year, naturally some of the many plans for saving very weak colonies are sure to be tried by beginners and others. I have generally been fortunate in not having many of these weaklings; but on some occasions I have tried some of the plans advocated, generally, with but indifferent results, to say the least. For the past four or five years I have been using a very simple plan, when there was any occasion for saving a weak nucleus, that is so safe and absolutely sure that I give it here in hopes that some one may be benefited.

Find the queen of a very strong colony and set the comb aside with Her Majesty. Then carry over some of the remaining frames with adhering bees, and shake before the weak nucleus that it is desired to save, having at first provided a runway for the bees to crawl into the hive. The old bees fly back to the old stand, and the young ones go into the weak colony, giving the best kind of help that it is possible to get. More than one colony can be drawn from if necessary, and it is surprising to note the difference in the weaklings in a few days' time—no brood chilled, no queens lost, no fighting, in fact, no trouble of any kind, and you are absolutely sure of the plan being a success every time. One time I went to an out-apiary about the first of May, and in looking over the yard I found a small nucleus with a queen bought the fall before. They were just as nearly gone as could be, without being "gone" altogether—probably not more than 50 bees left, and the queen was found crawling off at one side of the combs alone. A number of young bees were shaken in front of the hive as described, with some misgivings as to the result; but when, two weeks later, I came back, I could hardly believe the change that had taken place. If you have any weak colonies, try this plan and see if it is not a good thing for the purpose intended.

If a weak nucleus contains a valuable queen, it is probably worth while to resort to some such method to save the queen. Possibly ordinary queens are worth the cost of saving them in this way, in order that they may be on hand for use early in the season; but I have seriously questioned if the drawing on a populous colony to save a weakling was a profitable thing to do.

PREVENTION OF SWARMING.

A Radical Cure for the Swarming Habit of Bees.

The February Review described the Jones method of preventing swarming; the March issue told how the Doctor came to make the discovery; and the final chapter that is now to follow, tells of his experience with the method.

(Copyrighted)

Returning again to the season of 1909, having settled upon a routine of treatment to be carried out, will state that I began the season with fifty-four colonies in ten-frame Dovetailed hives with Hoffman frames. Ten colonies were Italians and the rest were hybrids—the apiary being located upon the back part of two village lots. Owing to a cold, late spring they built up slowly in the early part of the season. The weather being more favorable from May 15th to June 15th, they built up rapidly and were in good condition for the honey flow from white clover that began about that time and was at its best from June 20th to July 5th, when a severe drouth began to make itself felt. Seventeen colonies were worked for comb honey and the remaining thirty-seven for extracted. From June 26th to July 12th the swarming season was on in earnest, the most of them preparing to swarm out within ten days after June 26th. Of the seventeen colonies worked for comb honey, twelve of them built queen cells and were given the treatment, one of them being operated upon after it had started to swarm out, an account of which will be given later. Getting behind with my work, two colonies were given the treatment before making swarm preparations as they were very populous and the treatment was given as a preventative. Only one comb honey colony made swarming preparations after the treatment was given. That colony had a poor lot of brood combs, quite a large percentage of drone comb, and some of the remaining combs badly clogged with old pollen, which the bees were trying to chew up and carry out. They seemed to be hampered for room to establish a normal sized brood nest. It was given the second treatment nine days after the first one. None of the fourteen colonies

treated made any further preparations to swarm, but worked on with untiring energy, giving a good account of themselves as honey gatherers. Three of the comb honey hives made no attempt at swarming. They were weak colonies that were late in building up and were of the number that I had intended to run for extracted honey, but had been forced to give them supers with sections owing to a delayed order for supplies. They built up to the swarming point and made each about a super full of honey and would have needed a treatment soon only the drouth set in and cut short the flow of honey to such an extent that there were no more swarm preparations by any of the colonies in the apiary. In applying the treatment to the comb honey colonies my aim was to let them build cells and get as near to the swarming out point as possible without actually swarming. The same method was applied to extracting colonies, but more of that later. Opening the hives and examining frames for queen cells made work and plenty of it, too, and if the work had to be carried out along such lines it would have but little to commend it. I did not wish to leave a single loop hole for some doubting Thomas to jump up and say that perhaps my bees wouldn't have swarmed if I had left them alone, so in testing the plan for publication I proposed to know just how many were preparing to swarm and their condition at all times, and also to know the effect of the treatment given. If it was or was not a cure for swarming I wanted to know the facts. In order to show the severe test it was put to I will now give a brief outline of colony No. 36, with a pure Italian queen one year old. Records show that it was examined June 23 and no queen cells found, strong in bees and brood and working in the comb honey super. Owing to press of work I could not examine them again June 30th. July 1st I noticed that they were clustering out and not working as they should. The next day, July 2nd, as I working near them with a smoker in working order, I was dismayed to see the bees rush pell mell out of the hive just as I was on the point of examining them. Tried smoking them to stop their rush but they kept coming right out through the smoke. Finally, as a last resort, I grabbed up a small piece of board lying near and closed the entrance with it, all but about two inches at one end. Into this small entrance I blew clouds of smoke until I had them partially quieted and then I stopped it up with grass.

Went next to the bee house and procured a piece of perforated zinc. After adjusting it I stepped back to await results. The bees swarmed out at once and after circling around for several minutes without clustering, they finally began going back into the hive. I knew then that I had succeeded in imprisoning the queen, but was afraid to open the hive for fear they would swarm out. So I decided to wait until the next morning to look them over. This happened about 8:00 a. m., and about 11:00 a. m. they came out again, circled around and once more returned to the hive. At about 3 p. m. the performance was again repeated. Early on the morning of July 3rd I opened the hive and counted fourteen queen cells in various stages of development, three of them being capped over. Slashed off all the heads of the capped brood found in six frames, leaving two frames of nearly solid capped brood. Took especial care not to disturb any of the queen cells, and then closed up the hive wondering what they would do. Was in the apiary all of that day but they did not once offer to swarm out, but worked for dear life dragging out dead brood. Opened the hive again July 4th and found the capped queen cells torn open and the young queens removed. That colony made no further attempt to swarm and gave me nearly one hundred pounds of nice comb honey, despite the drouth that came soon after. Certainly no severer test of any non-swarming system could be made.

I will also give a condensed statement as to how the extracting colonies were managed. Having six queen excluders, they were placed over six of the largest colonies at the time they were given their first super. They all made preparations to swarm. They were given the treatment and no further attempts at swarming were made. Procured a dozen more excluders later and used them where the queen was found below, selecting populous colonies when possible. Not all of them built cells, due to the lateness of their use, perhaps. Besides the six colonies mentioned above, there were nine other colonies devoted to extracting that built queen cells and were given the treatment, and only one made preparations to swarm again and had to be given the second treatment. Only two out of twenty-nine colonies, thus far operated upon, required the second treatment. I will now account for the other twenty-two extracting colonies, for the reader may have gotten the impression by this time that I had no swarming, which would be erroneous. Will digress

long enough to state that thirty extracting colonies were crowded for room, which accounts in a measure for the large percentage of swarm preparation. Office duties, wiring of frames, and putting in of foundation, consumed so much time that the colonies could not all be examined every seven days as had been originally intended, and as a result three colonies that had not received treatment threw off swarms and were managed as follows: The first swarm that issued was hived on frames containing starters and placed upon the old stand. The old hive with super on was moved to one side as I intended to give the new swarm the old super as soon as they had drawn out sufficient comb to establish a brood nest. The weather being excessively hot and the bees being unable to break their cluster, became dissatisfied and deserted their hive the next day and settled on a low branch of an apple tree. Before they could be hived a swarm issued from another hive and settled with them on the same branch. Hived both swarms in the hive with the starters, capturing one queen as they were running in, and set the hive back on its original stand. Opened the old hive from which the first swarm issued and uncapped all brood but two frames, and was very careful not to disturb any capped queen cells. After this operation I placed the old hive over the new double swarm, with a queen excluder between, putting the super on top, making a three-story hive. Result, queen cells destroyed and no further attempt at swarming out. The hive from which the second swarm issued had all queen cells destroyed but one on the seventh day and no swarm issued from that time.

The next day another swarm issued from a colony that had not been treated. Hived it on frames with full sheets of foundation, setting the old hive to one side and placing the new hive on the old stand. At once gave the old colony treatment and placed it on new hive with excluder between and extracting super on top—the same procedure as before. It destroyed the queen cells and made no further attempt at swarming. The plan was a success in the two cases mentioned, and is worthy of a trial when no increase is desired. The method outlined prevented all increase in the number of colonies. There were fifty-four colonies spring count, and fifty-four when the swarming season was over. The remaining nineteen colonies which were run to extracting made no attempt at

swarming, but three of the stronger colonies were given the treatment, as a preventative, as they were becoming populous and I was getting somewhat tired of making such frequent examinations. The three made no preparations to swarm. The sixteen remaining colonies that did not arrive at the swarming point were colonies that were weak in the spring and were slow in building up and by giving them super room the swarming impulse was retarded. A summary of the season's work would be as follows:

Of the seventeen colonies run for comb honey:

11 were given the treatment after queen cells were built.

2 were given the treatment as a preventative of swarming.

1 was given the treatment after swarming out had commenced.

3 made no preparations to swarm.

Of the thirty-seven colonies run for extracted honey:

15 were given the treatment after queen cells were built.

3 were given the treatment as a preventative measure.

2 were given the treatment after swarming and before uniting.

1 had all queen cells but one pinched off on the seventh day.

16 made no preparations to swarm.

One comb honey colony and one extracting colony made preparations to swarm the second time and were given the second treatment.

In no single instance did a colony swarm out that had received the treatment. Neither did any of the few colonies that were treated during 1906, 1907, 1908 swarm.

Whether the method of swarm control here described is really the C. Davenport secret or not will never be known unless, perchance, some of his neighbors have knowledge of it, for in the article of March 1st, 1906, referred to, he speaks of operating upon his neighbors' bees, free of cost, in order to test the treatment. If it is not his treatment, it at least fulfills every indication claimed for his method. The bee journals for July, 1908, announced that C. Davenport, whose real name was C. Davenport Monette, met an untimely death one night in June when his house burned down, and that he was a resident of Chatfield, Minn. For the information of the reader, I will say that Chatfield is a town fifteen miles north of here.

Now, as to whether uncapping a less amount of the sealed brood would pre-

vent all swarming or not, is a problem that I have not as yet tested out. Perhaps if one-third or even one-half of the sealed brood was allowed to remain, the over-crowded condition of the brood nest might be relieved sufficiently to cause the bees to abandon swarm preparations. My experiments ranged between leaving two frames of sealed brood and uncapping all there was in the hive. If a less amount of uncapping would "knock swarming in the head" it would be an advantage to the timid bee keeper who might have some compunctions of conscience about destroying so much sealed brood. Personally, I do not consider the matter of material importance, as the plan outlined gives all the workers needed for the clover and basswood flow in our northern climate, and the open brood left undisturbed, together with the newly laid eggs that have been deposited in the cells from which the uncapped brood has been removed, gives an army of workers for the late fall flow, without having a hive full of consumers right after the first honey flow is over. The plan can be adapted to southern conditions where the swarming season begins a month or so earlier than the main honey flow. Can see no reason why the plan cannot be adapted to any locality where bees are kept. It is bound to revolutionize bee keeping all over the world, or I am woefully mistaken in my judgment.

It is hardly necessary to caution the reader not to use this method if his apiary is infected with foul brood, owing to the danger of carrying the disease from infected to healthy colonies.

And now, brother and sister bee keepers, allow me to state in conclusion that I have outlined a simple plan of swarm control that the bee keeping world knows nothing about so far as I am aware, and I offer it to you for your approval or condemnation. At a rough guess I expect nine out of ten of you will read the statements herein made with a good deal of suspicion, furthermore I expect all of you to accept them with a "grain of salt." All I ask of you is that you give the plan a fair trial, for I know that you will be surprised at the results. The treatment being so simple and easy and the results so surprising, it was a difficult matter for me to believe it myself, even after having proof right before my eyes. After you have given it a trial I feel sure that you will not consider my statements extravagant and when the full extent of its possibilities are realized the bee keeping world will render their verdict in

accordance with the claims I have made for the treatment.

The Jones method of swarm-prevention is now before you for discussion. I expect that it will be both approved and condemned. That it is effectual I have not a particle of doubt, but as to whether it is a desirable and profitable method of prevention is an open question. Quite a number of subscribers have written and expressed surprise that I should endorse the Jones method. I have not endorsed it further than to offer the book for sale and copy it into the Review. It is a novel, radical, and, I believe, effectual plan for preventing swarming, and I consider it worthy of consideration and trial, but that it is free from objections I think no one will assert. To my mind, the most serious fault is the rearing of brood that must be sacrificed. It costs honey and the time of the bees to rear this brood, and the loss in this direction must certainly be serious. I will admit that the plans that may be carried out when swarming is absolutely prevented, might be of sufficient value to offset this loss. I have had some correspondence with the Doctor on this point, suggesting the removal of the brood and its use in building up weak colonies, or the making of increase, instead of destroying it, but he believes that the same results will not be secured. He says that the destruction of that brood, and the carrying of it out, puts the bees in a far different mood from simply removing the brood—and I can well believe that it might. Mr. Coverdale, however, removed the brood (all of it) by cutting it out, and setting it in a box by the side of the old hive, where it hatched and the young bees eventually joined the old colony. Of course, there are similar plans that prevent swarming, but they bring in extra hives, and appliances, and more or less complicated operations. The question is, which will you choose?

The next objection is the disagreeable nature of the operation. To open the hive and slice off the heads of the sealed brood is far from pleasant. Of course,

life brings many unpleasant tasks, and, perhaps, we ought not to shrink from this simply because of its repulsiveness, if the results justify the means. To be able to go into an apiary and so change conditions in one day that there will be no swarming for a week or ten days, allows us to do great things in the way of running out apiaries and keeping more bees. There is more than one way of accomplishing this, and the question is, which method is preferable?



QUEENS

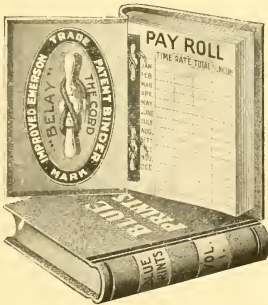
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W. Z. Hutchinson, Flint, Mich.

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W. L. Hutchinson, Flint, Mich.

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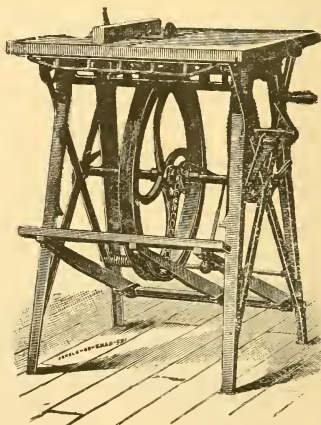
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In addition to this the honey is to be classified according to color, using the terms, white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—We quote as follows: Fancy white comb honey, 16 to 17c; No. 1 white, 15 to 16c; fancy white extracted, 9 to 10c; light amber, 7 to 5c; beeswax, 32c.

BLAKE, LEE CO.
4 Chatham Row,
Boston, Mass.

Mar. 10, 1910.

KANSAS CITY—Our market is entirely out of comb honey—nothing left in the jobbers hands. We quote as follows: No. 1 white, \$3.50 to \$3.75 per case of 24 sections; No. 1 amber, \$3.00 to \$3.25 per case of 24 sections; white extracted, 7c; amber, 6½c; beeswax, 25c to 28c.

G. C. CLEMONS & CO.,
Kansas City, Mo.

Mar. 21, 1910.

CHICAGO—The season for the sale of comb honey is about over. At no time has there been an excess supply. We quote as follows: Fancy white, 18c; No. 1 white, 16c to 17c; fancy amber, 12c to 13c; No. 1 amber, 10c; fancy dark, 9c; No. 1 dark, 8c; white extracted, 7c to 8c; amber, 6c to 7c; dark, 5c to 6c; beeswax, 32c.

R. A. BURNETT & CO.,
199 S. Water St.

Mar. 19, 1910.

DENVER—We quote our local honey market as follows: No. 1 white, per case of 24 sections, \$3.30; No. 1 light amber, per case, \$3.15; No. 2, \$3.00; white extracted, 7½ to 8½ cents; light amber, 6½ to 7½ cents. We pay 24 cents per pound for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASSN.
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Denver, Colo

Sept. 22, 1909

TOLEDO—The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.,
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Feb. 19, 1910.

CINCINNATI HONEY MARKET—The demand for honey is declining, as the warm weather approaches, with prices about the same as last month. We quote best table honey at 9½c per pound, in 60 pound cans; second grade at 8½c, in 60 pound cans. Amber in barrels at 6c and 7½c, according to the quality and quantity bought. Fancy comb honey is selling at 15c and 16c. We want shipments of beeswax at 30c cash delivered here, or 32c in trade.

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51 Walnut St., Cincinnati, Ohio

Mar 19, 1910.

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Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider

the great saving of labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.

The A. I. Root Company, Medina, Ohio

MAY, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 247.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, May 1st, 1910

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All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 6 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Hand's HANDSOME HUSTLERS

Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, \$1.00 each; six \$5.00; dozen, \$9.00. Tested, \$1.25; six, \$6.50; dozen, \$12.00. Three-frame nucleus, without queen, \$3.25; add price of queen wanted. Don't take chances. Get the real thing. Send for circular.

J. E. HAND

Birmingham, Erie Co., Ohio.

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of members.

To prevent the adulteration of honey.

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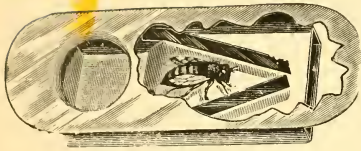
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Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

Italian Queens

By Return Mail. Bright, Golden and Red
Clover Stock, Bred for Beauty
and Business

Select Untested in May, \$1 00 each, or six for \$5.00. Tested, \$1.50 each. After June 1st, 75 cents each; three for \$2.00, six for \$3.75 or \$7.00 per dozen. Tested \$1.00 each. Nuclei on two frames (Hoffman or Danzenbaker) with young queen in May, \$3.00; after June 1st. \$2.50. Safe delivery guaranteed. Circular for 1909 ready. Send for one, it will interest you.

Geo. W. Barnes

3-08-tf

Box 340, Norwalk, O.

NOBODY GETS STUNG
WHEN HE IS WISE ENOUGH TO USE THE DANDY
MUTH IDEAL BEE VEIL

3 HONEST OPINIONS

"IT'S THE BEST ON THE MARKET"—DR. D. EVERETT LYON, ALLENDALE, N. J.

"IT IS A VERY GOOD VEIL"—MR. W. T. FALCONER (MODEST BUT DECIDED)

"IT'S THE VEIL"—MR. FRANK RAUCHFUSS, DENVER, CO.

AND IF TEDDY HAD HAD ONE WITH HIM IN AFRICA, HE WOULD SURELY HAVE BEEN "DE-E-E LIGHTED"

You need this veil more than you do the 75c. it costs, delivered. And why are you waiting to ask for our catalog of bee supplies? It's free.

THE FRED W. MUTH CO.,
"THE BUSY BEE MEN"

51 WALNUT STREET
CINCINNATI, O.

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VANDEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

AS USUAL

Franklin, Tenn., Feb. 19, 1910.
Mr. C. H. Weber,
Cincinnati, Ohio.

Dear Sir:—Your consignment has arrived all O. K., and I find everything I ordered. I wish to extend many, many thanks for your promptness and fair dealing. All future orders will be sent to you. Very truly yours,

W. A. MOORE.

I want you to notice four things in the above letter

1—The goods reached Mr. Moore O. K. We know how to pack carefully and securely, and without useless weight.

2—He found everything ordered. We carry large stocks always on hand, and our system of checking prevents annoying mistakes.

3—The advantages we have for prompt delivery are unsurpassed. If you want goods quick, send to Weber.

4—Fair dealing is now and always has been our motto.

Catalogs have been mailed to nearly all our customers. If you have not received yours send us a line, and we will get one to you by return mail.

C. H. W. WEBER & CO.,
2146 Central Ave. Cincinnati, O.

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.
Jamestown, N. Y.

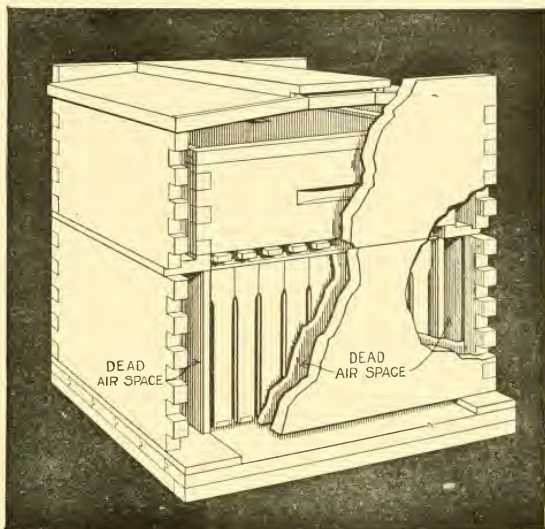
PROTECTION HIVE

All arguments lead to a matter of protection, look where you may. Dead-air-spaces or packing, as you prefer.

The hive that is sold at less than the material in it will cost you at your local lumber-dealers, equally good stock being used.

Send us a list of goods wanted, and let us figure on Dovetail hives, sections, foundation, and all bee-keepers' supplies. We will save you money.

Special circular of Protection hive, and new 1910 catalog now ready.



A. G. WOODMAN CO., Grand Rapids, Michigan

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queen, in May, \$1.10; tested \$1.50; select tested, \$1.65; breeder, \$2.75. One-comb nucleus, \$1.15. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for sample of comb foundation. 5-10-11

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

We will pay 30c a pound, delivered New York for choice quality pure

BEESWAX

Until further notice. Alfalfa honey, new cans and cases, fancy light, 8c a pound, fancy amber, 7c a pound, f. o. b. New York, in not less than five case lots. Will shade prices on larger quantities. Shall be glad to send samples.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

“DADANT'S FOUNDATION”

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER'S FOUNDATION

and WORKING your WAX for you.

Write us for ESTIMATE on full LINE of SUPPLIES. It will pay you and costs nothing,
RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

Standard Goods

Of the A. I. Root Co. I have them Hives, Supers, Sections, Foundation, Smokers. Shipping cases: also A. B. C. in Bee Culture. Kept in stock ready to ship. Beeswax wanted. Catalog free.

D. COOLEY, Kendall, Mich.

ITALIAN BEES and Queens and Supplies. Root's standard goods. Ask for circular. Also Apiary, El Toro, Calif. 2-10-11t

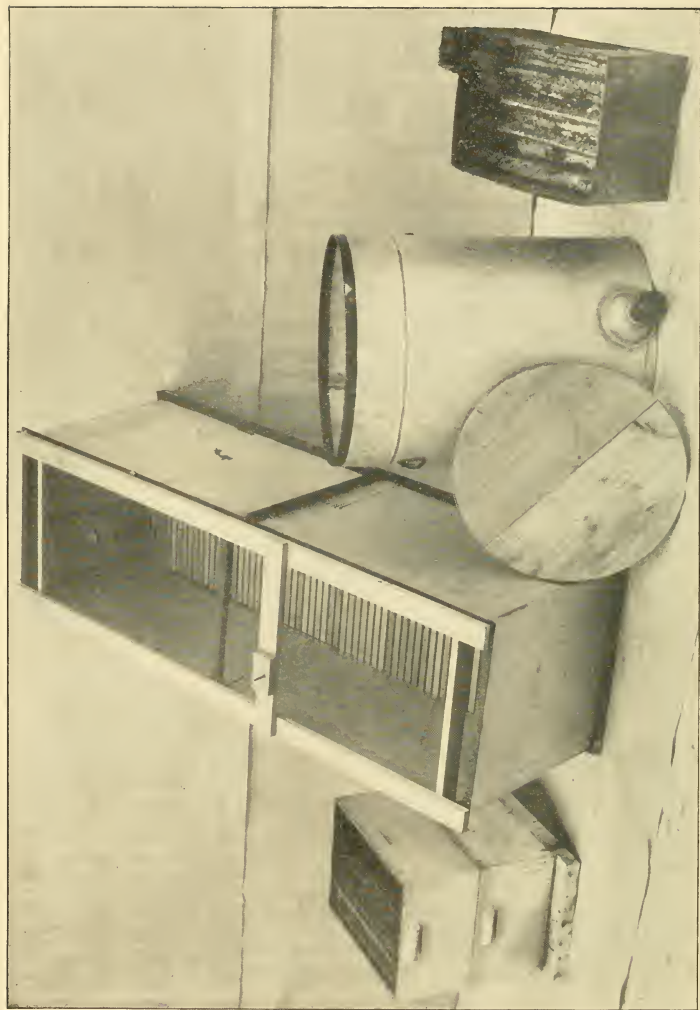
Italian Queens

And Nuclei. Tested queens, \$1.00 each; untested, 75 cts. each. Nuclei, 50 cts. per frame, with price of queen added: Ready to ship March 15th.

C. B. BANKSTON, Rockdale, Texas

2-10-tf

For Sale 350 plain section holders for 1½ x 4¼ plain sections. Would exchange them for 1½, bee-way section holders. Also have a few bees for sale. 4-10-tf
CLYDE CADY, Grass Lake, Mich.



Implements Used by E. D. Townsend in His Latest Method of Extracting.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, MAY 1, 1910.

NO. 5

The Profitable Production of Extracted Honey Depends upon the Tools Used.

E. D. TOWNSEND.



THE tools we use, and the system of using them, determine, to a great extent, the amount of work accomplished in the harvesting of a crop of extracted honey. A never-

to-be-forgotten day in our early bee keeping experience, was when a neighbor helped extract, can, and weigh up, in 60-pound cans, 1,600 pounds in one day. For several years this stood for the limit; two of us usually extracting twelve or thirteen hundred pounds a day, on the average. As our mind goes back over these early days, we cannot help thinking that the little accomplished was not so much on account of not knowing how to do, as it was on account of not knowing what tools to use and how to use them.

In buying bees, some whole yards have been acquired. In some cases they have been worked where they were purchased, for a season or two. We

usually get what fixtures there are with the bees, and these are often used in connection with some we would have to supply, to get along. Working bees for extracted honey, with the tools found at most bee yards is rather up-hill business.

Especially, is it important that the extracting house be arranged to the best advantage, so that everything is handy to work with. In later years, since we have had experience with many different tools and conveniences, we are convinced that the worst drawback we had to contend with, was tools of *too small capacity*. It would be impossible in this article to mention all of the discarded tools we have been obliged to work with; instead of this, the more up-to-date implements, and our mode of using them, will be described; mentioning the discarded tools only as a comparison, in describing the later kind.

THE SECTIONAL HONEY HOUSE.

In the production of honey in out-yards, nothing has stood the test of years like the sectional honey house. This has been described several times. The house is very plain; just a bee-tight wooden

building, 12 x 16 feet in size, with six-foot posts. The structure is built in sections, and bolted together at the corners. The two halves of the roof are built separate, and the floor is in two sections; all portable, and can be moved at one load on a wagon. The material is $\frac{3}{4}$ -inch-thick planed boards for the siding. The frame is of 2 x 4rs, planed down to 1 $\frac{1}{2}$ inches by 3 $\frac{1}{2}$ inches. This is heavy enough for this size of building, and is lighter to move. The sleepers are of 2 x 6 inch, placed 16 inches apart. The floor is made bee-tight by planing and matching. The inside of each house is lined with tar-felt paper, fastened on so nicely with lath, that not a single bee can get in. Other papers will not answer, as mice will gnaw them full of holes, necessitating repapering.

ADVANTAGES OF THE MCINTYRE UNCAPPING TANK.

This is a stock-watering tank, made of galvanized steel. It is two feet deep, twenty-two inches wide, and six feet long, with a gate near the bottom at one end. A slatted bottom provides for the drainage of the cappings. This slatted bottom of the uncapping tank is built of three-fourth-inch-square pieces of white pine lumber, 21 $\frac{1}{2}$ inches long, spaced $\frac{3}{8}$ -inch apart, nailed to two longitudinal pieces of the same material, 2 $\frac{1}{2}$ inches wide, and a half-inch less in length than the inside length of the tank. The afore-said $\frac{3}{4}$ -inch-square pieces are nailed on the edges of the longitudinal strips, thus forming a 2 $\frac{1}{2}$ -inch reservoir under the frame, to catch the drip from the cappings.

A COMB RACK AT THE TOP OF THE TANK.

A frame of $\frac{3}{4}$ -inch-thick lumber, 2 $\frac{1}{2}$ inches wide, composed of two longitudinal pieces one inch longer than the tank, and two transverse pieces of the same material, cut $\frac{1}{4}$ -inch less in length than the inside width of the tank. To assemble: Place the two short pieces of material parallel with each other, the distance apart of the inside length of the tank, less $\frac{1}{4}$ of an inch; standing on

edge. Transverse of these, and parallel with each other, 18 $\frac{1}{4}$ inches apart at their inside edges, nail the two longitudinal pieces.

Built this way, the two cross-pieces of the frame are on the under side, and drop down into the tank, and hold the frame in place. Some of our later tanks have corner braces at the top; this necessitates placing the cross-pieces in from the end of the tank—the illustration will show this style of tank.

The longitudinal pieces of the frame being placed 18 $\frac{1}{4}$ inches apart, are the same width as the inside length of the Langstroth hive, and are built this width to accommodate the frame after being uncapped. Although this width will allow of the frame of honey being placed down, in the same position as if in the hive, it is rarely ever used this way, for it is much more handy to allow but one end of the frame to go down into place, the other end resting on the bottom bar.

A rest for the frame of honey while uncapping is made of two pieces of this same $\frac{3}{4}$ -inch material, and a 20d spike cut off 1 $\frac{1}{2}$ inches long and sharpened. The main cross-piece for the rest is cut 22 inches long. This cross-piece is tacked on with only a small nail at each end, as, when in use, it is placed at different positions over the tank, at the option of the operator. The other piece is cut three inches long, and is to hold the sharpened spike, that the frame rests upon while uncapping. This pivot that the frame turns on when uncapping, is driven through from the under side, near one edge. The pivot block is nailed on permanently, at the proper place, then, when the uncapping is to be done from the opposite side of the tank, the whole cross piece is tacked on the other end too.

Some of the advantages this uncapping tank has over the cracker barrel tank, placed over a wash tub, as we have been using in years back, are, first, the greater capacity; second, larger drainage surface, thus leaving a less per cent. of honey in the cappings; third, sanitary, as

the honey as it drains from the cappings is enclosed, and away from the bees, etc., except as it runs out into the pail under the gate; fourth, convenience. One of the most disagreeable and "sticky" manipulations about the harvesting of a crop of extracted honey, where cracker barrels are used for uncapping tanks, is the lifting of the tanks, heavy with honey and cappings. Then, each night, sometimes oftener, the emptying of large tubs heavy with honey.

DISPENSING WITH A STRAINER BY USING A SEPARATING TANK.

Previous to the bringing out of the separating tank which we are about to describe, two general principles were employed in separating impurities from honey, at extracting time. One was the furnishing of tank-room enough to hold the day's extracting, letting the honey stand over night, then, after skimming, drawing off from the bottom. Of course, none would be drawn after scum, or impurities, were seen to come through the gate; what there was left in the bottom of the tank going into the next batch. The other plan, and the one most generally in use, is to strain through cheese cloth or fine wire screen, before canning. Some of the disadvantages of the former way is, that so much tank-room is necessary, (valuable room is occupied with tanks) slow work in drawing off and canning cold honey; aroma is lost by allowing the honey to stand in open tanks, exposed to the atmosphere. Some of the disadvantages of the strainer are, limited capacity; sticky strainers to

wash and change; occasionally, contents and all falling into the tank, causing much delay and annoyance. The washing and handling of the strainers is a very disagreeable job for a *man*. We *hope* to avoid this in the future.

THE IDEAL TANK.

It is evident that the ideal tank would be of unlimited capacity, that would do its work properly, with no let-up. To be what its name implies, it must handle the honey from an extractor, be it more or less. The one that we will describe has handled 3,000 pounds in one day, and done its work well, *without a single hitch, or let-up*.

The tank, as we have used it, is built of galvanized steel, about 22 inches in diameter (round) and 32 inches deep, and we do not know of any reason for changing this size. A 1½-inch bore, Scoville honey gate is soldered near the bottom. The Scoville gate throws a round stream of honey, no matter how wide open it is used, and is just the gate for filling 60-pound cans.

The main feature of this tank is the separating float. This is a disc, built of ¾-inch lumber, and is one inch less across than the diameter of the tank. At intervals of a few inches, in the entire circumference of the disc, staples are driven in, projecting ⅜ of an inch. The purpose of the staples is to cause the separating float to remain in the center of the tank.

In our next article our mode of using these tools and fixtures will be explained.

REMUS, Mich., March 7th, 1910.



Perfect Control of Bees Would Make Comb Honey Production as Cheap as Extracted.

J. E. HAND.

FRIEND Hutchinson:—Your editorial comments at the close of my article, page 115, proves how difficult is the task of writing so as not

to be misunderstood. I did not intend to convey the idea that one branch of bee keeping was more honorable than another, nor to "point the finger of scorn" at the

producer of extracted honey, as you so dramatically put it. Neither is it my purpose to array one class of bee keepers against another.

I fully agree with you that, in many locations, changed conditions necessitate a change to extracted honey production; however, in the editorial you do not mention any changed conditions. All the excuse you offer for the frequent exhortation to bee keepers to keep more bees and produce extracted honey, is that it requires two or three times as much labor to run an apiary for comb as for extracted honey production.

I don't for a moment question the right of any bee keeper to produce the kind of honey he chooses; but when any one says that it requires twice as much labor to run an apiary for comb as for extracted honey production, I say, most *emphatically*, there is something radically wrong with that man's methods. I have stated elsewhere, and I repeat it with emphasis, if there is more profit in the production of extracted than in comb honey, in Northern Michigan, or in any other equally good location, then the methods of comb honey production of that country need a lot of doctoring.

Even a careless reading of the editorial in question would reveal the unmistakable fact that the editor is an extracted honey man, which he has a perfect right to be. I esteem him as a personal friend, and am happy to say can agree to disagree with him, and love him still.

I agree with his statement that it is natural for some men to seek the line of least resistance, but I am glad to know that all men are not made of that kind of material. Think you that, if the editor of the Review had sought the lines of least resistance he would now be filling the editorial chair of an influential bee journal, or reclining in the lap of luxury in that new home with all its modern conveniences? Shall we look for progress and advancement along apicultural lines from those who seek the

line of least resistance, and who drift along with the tide, or from those who with a grim determination that knows no defeat, overcome seemingly unsurmountable difficulties, turning defeat into a glorious victory?

Bee-keeping is still in its infancy; but little is yet known about the perfect control of bees which is the foundation of the most perplexing problems of apiculture. It is a mistake to suppose that we can attain to the highest success, financially or socially, by following the lines of least resistance.

For generations, the bee keeper has been a bearer of heavy burdens, over a pathway of uncertainties; for generations the pursuit of comb honey production has been fraught with disappointing results, and vexatious losses, on account of the inability of man, with all his boasted wisdom and superior intellect, to control the swarming impulse of bees with economy of labor. With this problem once solved, comb honey can be produced in out apiaries cheaper than extracted, and with the difference between the price of these two commodities, it is easy to see which it will be the most profitable to produce.

It matters little to the writer that his ideas will not be considered as orthodox by the rank and file, as he has not practiced orthodox methods for a quarter of a century, since which time he has refused to follow blindly in the circle prescribed by the founders of apiculture of past centuries, or to practice the primitive and laborous methods advocated by alleged up-to-date bee keepers of modern times; choosing rather to practice those methods that will give him perfect control of bees at all times; and, in order to maintain his reputation for extravagant statements, permit him to say it is the privilege of every comb honey producer to keep twice as many colonies of bees as he is now keeping with no more expense for labor and to enjoy the blessings of perfect control of

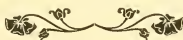
bees to his utmost capacity, as well as to his financial prosperity.

In conclusion: Keep more bees, and produce both comb and extracted honey, for one can be produced just as cheaply as the other, when you have the key to the perfect control of bees with economy of labor.

BIRMINGHAM, Ohio, April 16, 1910.

[No one knows better than myself, Bro. Hand, how difficult it is to so write as to make it impossible to be misunderstood. For instance, in saying that man, in seeking a livelihood, usually sought

the line of least resistance, I did not intend to say that some of us have not ideals and ambitions, for the fulfilment of which we are ready to labor and endure. I am well aware that with swarming controlled, profitably, great things may be accomplished in the production of comb honey. I would not be so fool hardy as to say that comb honey will never be produced as cheaply as extracted, but it won't be with our present methods. I have great respect and admiration for men who are not chained to orthodox methods.—EDITOR.]



Making 100 per cent. Increase, yet Getting a Full Crop of Comb Honey.

LEONARD S. GRIGGS.

I have been in the bee business eleven years, and, during the past four years, have managed from three to four apiaries, consisting of from 170 to 280 colonies; doing nearly all the work alone. One apiary is run for comb honey, and the others for extracted. I have tried quite a number of different methods of swarm control in the production of comb honey. I have tried caging the queen for ten days, removing all queen cells at time of caging, also removing queen cells eight days later. By this method, swarming and increase are prevented.

Very few of my colonies are ever allowed to get far enough advanced for natural swarming; so you will see that I do not approve of that method.

I tried the Doolittle method, which is to place a full set of drawn combs on a colony, over a queen excluder, as soon as the colony is populous enough to need them. But I find the trouble with this method is that the bees sometimes get too much honey in the combs before I can give them the needed attention, which consists in shaking them from the brood onto these combs in the upper

chamber, and giving them a super of sections at the time of this operation.

"DOUBLE-SHOCK-SWARMING."

I will now describe the method which I find the most satisfactory of any, giving 100 per cent. increase, and as good a crop of comb honey as a non-swarming colony.

With this plan I prefer to clip all queens while fruit trees are in blossom, and, as soon as colonies are strong enough to require sections, give them their first super, containing a few sections of partly drawn combs, which are placed next to the outside row of sections in the super.

The next thing is to see that all hives are in readiness for making increase when needed; and, as soon as the bees begin preparations for swarming, which, with me, is usually a few days after white clover begins to blossom, I examine all the colonies, and any colony having queen cells with larvae in, is shaken into another hive which is placed upon the old stand. This new hive has all its frames filled with full sheets of medium brood foundation, excepting one frame of full drawn comb, which must have had brood reared in it, at least one season.

This comb is placed in the middle of the brood chamber. The supers on the old hive are transferred to the new hive on the old stand.

The next step is to shake all of the bees quite clean from all except two combs in the old hive. The bees on these two combs are left to care for the brood. In shaking the bees from the combs, I prefer having the queen enter the new hive with the last-shaken bees, as she is not then so likely to rush up into the super with the first-shaken bees.

After the bees have been shaken in front of the new hive, the hive of brood is placed behind and a little to one side of the new colony.

Everything is now left for about seven days without any farther attention. At the end of that time I again shake the bees clean from all the combs, except two, in the old brood chamber; shaking them, of course, in with the shaken swarm of the week previous.

I now give the remaining brood and bees of the old hive a young queen, and place them on a new stand, and they will build up into a strong colony by the close of the season.

Some may ask the question: "Does the shaken swarm prepare to swarm again, after receiving the additional shake of the week later?" In answer to this I would say about five per cent. have started queen cells again; some about a week after the second shake and others towards the close of the swarming season.

Perhaps my method of handling the comb honey supers may have something to do with so small a number of colonies not attempting to swarm. I nearly always place the empty super on top of the supers already on, as I do not wish to make a break in the cluster of bees. After the bees have begun work nicely in the last-added super, it may then be placed next to the brood chamber, the other supers being placed above it. I have had bees go up through five supers and draw out foundation as nicely and as freely as though it were right next to the brood chamber; the only difference being that they do not fill out the sections as full and plump, if left on the top to be completed.

FLINT, Mich., Jan. 14, 1910.



Sectional Hives may Help us in Securing Workers for the Harvest.

S. D. HOUSE.



AS every successful enterprise has some fixed plan of procedure, so we should have our particular method that is most advantageous to our surroundings. If we are to build

a permanent structure, our first duty should be to see that the foundation is

of the best material possible to be had. These truths apply to apiculture; and the foundation for a crop of honey is a vigorous young queen hatched the previous season, not later than the first of September. Such a queen will keep up brood rearing late in the fall, thus giving the colony a large number of young bees with vitality unimpaired to withstand the rigors of winter.

SHUT OUT THE WIND, LET IN THE SUN, AND
BEES WILL WINTER IN THE OPEN AIR.

Our bees that are wintered in the open air are protected from the winds by a



Hives Sheltered from the Wind; Packed in Leaves; and Warmed by the Sunshine.

shed facing about five degrees east of south. These sheds are entirely open in front, allowing the sun to strike the hives. This helps to keep them dry on the inside. The hives are placed about six inches apart, and are packed on three sides with maple leaves gathered with the dew on and thrown in a pile for future use. There is a seven-inch, telescopic cap on top of each hive, the

cap containing about four inches of leaves firmly packed. Entrances are left open the full width of the hives. There is a natural protection from the north and west winds, as will be seen from the accompanying illustration. We have wintered our bees in this manner for many years, and the loss is seldom above five per cent. Successful wintering is one of the principle factors in the

production of a crop of honey; and, with our bees well wintered, we will now suppose that we are about to enter the breeding season.

SPRING-FEEDING.

The first step is to contract the entrances to only two inches—even to one-half that with weak colonies. As early as the weather will permit, each colony is examined to see that it has plenty of honey in close proximity to the brood nest. If needed, a comb of honey is given. If there is no honey on hand, the feeding is done as follows: One part granulated sugar and two parts water are agitated until the sugar is dissolved, when one part liquid honey is added. Extracting combs are then filled with this syrup, and one hung each side of the brood nest. A perforated dipper is handy in filling these combs.

Where bees are unable to gather pollen until late in the spring, it is well to feed them a substitute. We use equal parts of flour and wheat middlings. Today (March 25th) the home apiary carried away 18 pounds of this mixture.

Many times, too great a quantity of honey is found in some brood nests. Perhaps it has candied and is difficult of removal. Such a condition retards the expansion of the brood nest. In such cases some of the honey should be removed and given to any colonies that are lacking in stores, placing the honey at the sides of the brood chamber. This practice ought not to be followed where there is disease in the apiary.

THE IMPORTANT PART PLAYED BY THE HIVE.

The hive plays a very important part during the breeding season. In my 40 years' experience I have used many styles of hives and frames, with more or less success. Some 16 years ago I adopted the shallow frame and divisible brood chamber as the best for comb honey production. Experience soon taught me that the sectional hive is not only superior in the production of comb honey, but also in the rearing of brood.

The bee way between the two sets of frames in the sectional hive provides an easy passage for the bees and queen to reach all parts of the hive without going around cold end bars or several top bars. This is of much value in the early spring. These shallow frames also allow of the use of lighter foundation. One wire may be needed to keep the foundation in the center of the frame—but not more.

With this hive the capacity of the brood nest can be instantly changed to meet the conditions of each individual colony. During the breeding season a large hive is often necessary to give room for the rearing of a large number of workers; and, again, there may be a colony, occasionally, not even able to fully occupy one section of the brood nest. Usually, a colony is wintered in two sections; which have a capacity equaling a ten-frame Langstroth hive. These two sections are usually large enough for the early part of the breeding season. The upper section is filled with brood first. Then the two sections are transposed, bringing the lower, empty, section at the top. It is surprising to see how soon the queen will now fill those combs with eggs. This expansion of the brood nest *upwards* is in keeping with the nature of the bees, and produces better results, as the same amount of heat generated by the bees will warm a much larger area above than at the side of the brood nest.

ENLARGING THE BROOD NEST UPWARDS.

About the time that fruit bloom opens we give, on top, an additional section having frames filled with foundation. This prevents the colony from becoming crowded with brood and honey, uses this poor grade of honey in comb building, and furnishes a set of *new* combs over which our sections of honey will be built later. After fruit bloom, if there is considerable honey in the upper section, it is placed at the bottom, and the bees will gradually remove the honey from so near the hive entrance, and distribute it around the brood. The moving of this

honey will result in a higher temperature inside the hive, and stimulate the queen to greater egg laying.

CONTRACTION OF THE BROOD NEST.

Here in central New York the breeding season is short, and the white honey flow begins about the 5th of June. At our home apiary we have no late honey flow, such as buckwheat, hence, after the flow is well on we reduce the amount of breeding by limiting the brood nest to only one section of the hive. This will supply the loss of bees, and keep the working force up to the desired capacity, but will prevent the wasting of time, energy and honey in the rearing of bees that will be useless to the colony or its owner.

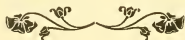
Our harvest is over about the first of August, when we requeen all colonies that have not been re-queened during the season, and give an additional section

of combs to each colony that has been reduced to a single section during the harvest. Having been limited in egg laying for two months, the queen is very ready to occupy the newly added combs; and this brood, when matured, furnishes the bees that are to go through the winter.

By this system of management, from 25 to 40 pounds of white honey, per colony, that otherwise would have been in our brood nests at the close of the season, are now in our supers in the honey house.

It is our belief that the time is not far distant when the sectional hive will revolutionize the production of comb honey; furnishing a more fancy article that will command a higher price and lead to a greater demand from its great beauty and attractiveness.

CAMILLUS, N. Y., March 25, 1910.



Keeping our "Bearings" by Means of a "Compass"

On the Front of the Hive.

D. STAD MENHALL.

ACCURATE knowledge of the conditions in the hive enables the bee keeper to work rapidly and effectively, and gives greater results. Owing to the variation of conditions in each hive, it is absolutely necessary to keep a record of some kind. Whatever system is used to keep this record, above all, it should be reliable and efficient, and admit of being instantly changed, without loss of time. In these three very important things the brick, stone or slate, placed in different positions on the hive cover, and the book, fail. It is easy for any one thoughtlessly or maliciously inclined to change the brick, stone or slate records. Keeping a book record is necessary when conducting experiments,

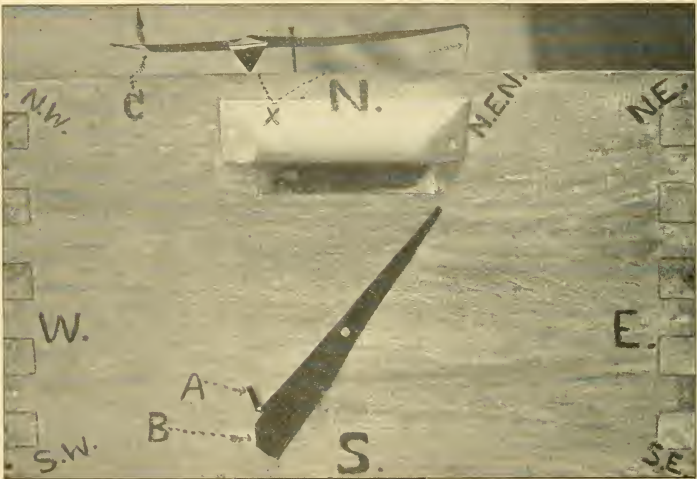
but for actual use in an apiary it takes too much time. There may be some satisfaction in studying a book record before going to the apiary, but I, for one, hope to be such a good bee keeper that, when I get those extensive apiaries a-going on land (maybe so!) I will not need to study about *what to do*—all I will need to know is the condition of the colony at the last examination, and, by the time I get the cover off, I will be be ready to *do*.

For the last two seasons I have used the compass record, as illustrated, in a small way and found it very satisfactory, cheap, durable and efficient, not only as a colony record, but for keeping the age and quality of queens. It was tried in

an out-apiary of eighty-odd colonies with good results. It certainly is cheap, as an empty three-pound tomato can, with a few tacks, will make one dozen or more.

There is very little new or original about it as it is the late E. W. Alexander's plan of cutting small pieces of tin in different shapes for keeping a record of the queen's age, as appeared in the

such condition, according to the system used for the different points of the compass to represent. The length of the needle will depend upon the depth of hive in use. For L. hives with hand-holds it can be seven inches long, providing the tack is driven through the centre of the needle as it should be. To prevent the needle from moving, $\frac{1}{8}$ of an inch of the sharp point of the needle is turned at



August Review for 1904, combined with the main principles of the Queen Registering cards as described on page 91 of the latest edition of "Advanced Bee Culture." It consists of a strip of tin, preferably galvanized metal of some kind, $\frac{1}{4}$ of an inch wide at one end and cut to a sharp point at the other, tacked on the hive-end over the entrance, where it is less likely to be disturbed. The hive-end is to represent a compass, and this strip of tin the needle, so that when the "needle" is turned to the various points of the compass it will mean that the colony is in such and

right angles. This turned point can be very quickly and easily pressed into the hive-end with the thumb, pocket-knife, or hive-tool, and as easily removed. Especially is this true when the needle is pointing in a northerly or southerly direction; as it is then, more or less with the grain of the wood. If the hive is made of very hard wood it would be advisable to make two cuts into the edge of the needle—on the side—in such manner, so that when the tin between these cuts is turned at right angles it will form a projection in the form of a glaziers's point. Then when the needle

points in an easterly or westerly direction this projection will be with the grain of the wood, etc.,. See edgewise view of needle at the top of the hive in the illustration—made extra large in order to show these projections that prevent the needle from moving, (x.) All reference letters enclosed in parenthesis will be found in the illustration.

For keeping the queen's age, cut two strips $\frac{1}{8}$ of an inch wide and one inch long, lengthwise, one on each side of the wide end of needle, turning *one* strip back (a—note angle of turn.) If the queen mated in an odd year—'07, '09, etc.—or if in the even years—'08, '10, etc.—turn both strips; thus keeping track of the queen's age for two years. For her quality, if she is an ordinary one, leave the wide end of needle—the part that is between the two "age strips"—in its original position; if fair, turn one corner back (b); good, turn both corners; and if extra good, turn all the wide end at right angles (c.) In moving a queen from one hive to another it is not necessary to remove the needle. Simply change the age and quality records of one to correspond with the other.

In addition to the above records, I will outline a system for keeping a colony record, in order to show the possibilities of this simple and inexpensive device. Supposing the needle is properly made, tacked in the centre of the front end of hive and it is the first examination in early spring. We find the queen, or, rather, evidence of her presence, plenty of stores, etc., in other words, normal condition, we will turn the needle north (n), being sure to press the 1-8 of an inch turned point of needle into the hive end, not only now but each time the needle is moved, so it will *stay put*. If the hive has hand-holds channeled out, this point can not be pressed into the hive when the needle is north. However, the needle will stay in that position (n) as it is placed perpendicularly, with heavy end down. On the other hand, suppose the colony is queenless, the age

and quality records should be turned to their original position, *i. e.*, not turned back, as a sign of queenlessness. As an additional sign the needle should be turned to one of the cardinal points, so as to be seen at a distance—say south (s.) If the colony rears its own queen, or if it was the swarming season, then northeast (n e), east (e) and southeast (s e) could mean queen cells, hatched larva, and sealed queen cells, respectively. Northwest (n w) west (w) and southwest (s w) could mean starving, gave one frame of brood, two frames, etc., or, if it were the surplus season, one super, two supers, etc., as the case may be, respectively. Using only the above mentioned points of the compass, records eight conditions, besides the age and quality of the queen. However, by using the points northeast by north (n e n), northwest by north, southeast by south and southwest by south, twelve conditions can be recorded. On Dadant's hive, or those of similar depth, the points northeast by east, southeast by east, northwest by west and southwest by west could be used, making sixteen records for such hives. Such is not the case with L. hives, because the depth is not sufficient to prevent records made with these points from being confused with others. Yet, if twelve records are not enough for L. hives, two compasses could be used, as they are cheap. One on the right of entrance for queen, the other at the left for colony, making twenty-four records.

While it takes considerable space to outline a system, remember all the above records can be made or changed from one to the other in *one to three seconds*.

From the fact that comb or extracted is produced exclusively in some apiaries, while in others both, and the great variation in the honey flows, to say nothing of the multiplicity of ways for managing bees, each one will have to work out a system best adapted for his conditions and management.

ON THE MISSISSIPPI, Dec. 10, 1909.

Is Specialty in Bee Keeping More Risky than in Other Lines of Business?

W. S. PANGBURN.



HAVING read the Review for some time, and knowing that its editor, and others who favor specialty, have, from time to time expressed themselves more or less emphatically

in favor of the same, I wish to say a few words on the subject. I will add that I, too, am in favor of specialty. Like Edwin Brooks, I think "It is better to know much of a few things than little of many things." However, I am not sure that it is good policy to advocate it too strongly without putting up the red flag occasionally to warn the younger and less experienced bee keeper that there is danger ahead. That the young bee keeper is likely, *quite* likely, to become very enthusiastic, we will all agree. Don't you remember when the fever seized you? How high your temperature run, almost to the boiling point? Mine did. And to tell the truth, it hasn't subsided yet; and I don't think it ever will. Hope not. For an enthusiast, with temperature running high, to read some of your specialist's articles might mean disaster, as you don't put up a single danger signal.

In the first place, perhaps your reader doesn't, as yet, know enough about bees to give up everything and "keep more bees." He might overlook this fact, and wake up some fine morning to find his bubble bursted. Then, again, your reader may not be well "fixed," financially; and should a bad year drop down upon him, could he carry through and support his family, until another harvest?

Suppose the farmer who, as the editor says, has 80 acres of land, and wishes to add to his income (page 48), cannot buy more land, either from lack of means or of opportunity—no uncommon occurrence in these parts. I am on an 80-acre farm, and have a system that I have been working on for the past 10 years. I milk about all the cows the place will keep, raise all the hogs I can feed without buying corn; and raise all of the corn I can, and maintain the fertility of the land. This is the plan followed by nearly all of the farmers in these parts. How are we to do *more* of these things we are already doing, when we have already reached the limit? It is true, some of us might do some of these things *better*, but every *good* farmer is producing all he can with these high prices. On the other hand, I can manage an apiary by hiring a little help until after harvest, or for about three months; and, by following my plan, or rather, Dr. Miller's, it isn't such an *awful* joke to handle a good sized apiary and an 80 acre farm; in fact, they make an ideal combination for a man who isn't afraid of *work*.

Get your "superabundance" of supers filled and ready, and hives in readiness, in the winter when business on the farm isn't so rushing, and you have solved a goodly lot of the labor question; at least, until your busy time is over on the farm.

I will admit that an apiary run in connection with a farm isn't *always* run as it should be; but, on the other hand, I don't know of anything in proportion to the money invested that would bring in any more clear money than an apiary, even if it isn't run exactly on orthodox principles. While I intend, some day, if everything works out as I have it now planned, to make bees my specialty, yet

I don't see my way clear just now to abandon everything else. There are some things about the extracting and swarming business that I have yet to learn. I think any one making a specialty of bees should understand pretty much all sides of the business.

Now, friend Beaupre, don't you put it a little strong when you go on record as saying "a man who tries to farm and keep bees don't know much about bees, and probably never will?" While this is quite true in many instances, yet I know of but very few men in these parts making bees a specialty, who are not only running 80-acre farms, but 160, and some 500 acres; and they clean up from \$500 to \$1,000 per year; and one man even more. If you got into conversation with them, you would probably find that they knew a good deal about bees. I remember several of them putting out the danger signal to me when I was just starting. They showed me the dark, as well as the bright, side of bee keeping. "Don't go in too deep till you can handle them." "Be sure you like the business, and be sure, very sure, you like bees; if you don't, you better not go in too deep." "Don't go in too much for looks," one man said, "all the fancy articles are all very nice but not always essential. It's the honey you want." I know of one fellow who got the fever so bad that he borrowed money, purchased "more bees," quit his job (R. R. operator,) hit a poor year, and his bubble bursted, and so did he. He got all the specialty he wanted, and never kept bees since.

Now, methinks, I hear some one say: "He didn't know his business as he should. He was inexperienced. One shouldn't make a specialty of bees till one is competent." Well, put up your red flag then. How does one always know one is competent to specialize on bees? It is somewhat of a lottery at best. Some men who can handle a retail business successfully, would be swamped with a wholesale business. While most of the writers for bee journals could, no doubt,

make a specialty of bees and succeed, yet *they* are few in numbers compared to the vast number who *read* the journals, and of whose ability you know nothing. Go on brothers with your specialty, but put in a few *ifs*. Some of us might think we were competent when we were not.

CENTER JUNCTION, Ia., Feb. 24, 1910.

[Let no one imagine that I am displeased at the receipt of a letter like the foregoing, or that I am loth to publish it. I am always pleased to receive articles that oppose my views, especially when so fair, gentlemanly and friendly as the above. Neither let any one imagine that I have no sympathy for the farmer-bee keeper, or that I have no desire to help him. I think I have never said that bee keeping could not be successfully combined with some other pursuit. My contention is that the *highest* success can be looked for only in specialty, let the pursuit be what it may. It seems to me almost impossible that it should be otherwise.]

Mr. Pangburn says that he believes in specialty himself, wishes that he might follow it as a bee keeper, and indulges the hope that he may sometime be able to make his present dreams come true. I think his situation is that of many others, viz., that *present circumstances* are not favorable for the adoption of specialty. To be a success, specialty must be adopted *wisely*. The cautions of our friend are excellent. To engage extensively in any enterprise without a most thorough knowledge of the business is almost suicidal. In this respect bee keeping does not differ from other pursuits. Farming is held up as the most stable and certain of any business, yet the man who should embark in it extensively, with little knowledge on the subject, would almost certainly "fall down." I can imagine nothing more rash than for a man unfamiliar with bee keeping to venture his all in the business; one should *grow* into specialty. The trouble is, as I look at it, that so many bee keepers stop growing just as they

are ready to graduate into specialty. They understand bee keeping thoroughly, yet they dally along, for years, with a single apiary of less than 100 colonies, dividing their time with some other business that is just about half-managed as it ought to be. Many men in this position could adopt bee keeping as a specialty, greatly to their profit. Many have done it; as I know from the letters that I receive. Such a letter came only a few days ago from a man who once was a farmer with a small apiary. Now he has dropped everything except the bees, and keeps several hundreds of colonies. One little sentence in his letter is very pertinent: "I don't even keep chickens. The proceeds from one colony of bees will buy all the eggs and chickens that I

want for a year, and I can care for this colony of bees with one-tenth of the work that I would have to spend on a small flock of chickens." The poultry specialist could put up a similar argument. The proceeds from half a dozen hens would buy his honey for a year, with much less trouble than trying to raise his own honey.

Many men who are not specialists, but ought to be, need shocking; need to be waked up; to set to thinking. They have lived along in the same old way so long that to make a change does not occur to them. All I ask is that a man give the matter serious thought for a few days, or possibly, weeks, and if he decides that specialty is not for him, I have no quarrel with him.—EDITOR.]



EDITORIAL

The Ontario, Middlesex, bee keepers' association will hold its spring meeting in the City Hall, London, on Saturday, May 7th, commencing at 10:00 a. m. Mr. Morley Pettit, of the Ontario Agricultural College, will be present and take up the subject of "Co-operative Experiments in Bee Keeping." Other prominent bee keepers are to take a part.

E. T. BAINARD, Secretary.

AMBROSE DOWSWELL, President.

The Morris Method of Introducing Queens.

Mr. W. C. Morris, of Yonkers, N. Y., writes me of a somewhat novel plan for introducing queens, one that he says has yet to fail with him. Take from the hive two combs with the adhering bees, and, by the use of a tin, sugar-shaker, dust the bees thoroughly with powdered sugar, then sprinkle the queen well with sugar, and allow her to run in between

the two combs; returning them, of course, to the hive.

Information Wanted on Honey Dew.

Dear Mr. Hutchinson: Since honey dew was so abundant in many parts of the eastern United States during the past season, it would be well for the bee keeping industry to know, if possible, what conditions brought this on. I should very much appreciate it if the readers of the Bee Keepers' Review, who had honey dew last year, would answer the following questions, and, in addition, give any facts which might help in solving this problem.

Was there any honey flow from flowers?

Did bees work on honey dew and flowers at the same time?

What was the average amount of honey dew per colony?

On what kind of tree or trees were the insects which produced the honey dew?

Give dates showing the duration of the honey dew yield.

Was much honey dew used for winter stores?

Is the mortality of colonies up to the present date any greater than usual among your own and neighboring bees?

What information have you as to the extent of territory in which honey dew was abundant?

Replies may be directed to the Bureau of Entomology, Washington, D. C.

Respectfully,

E. F. PHILLIPS,
In Charge of Apiculture.

Preventing Swarming by Changing Brood

Combs and Uncapping Drone Brood.

A Canadian bee keeper says, in a private letter, that, for six years, he has practically prevented swarming, and secured large crops of comb honey, by transposing the brood combs in the brood nest, putting the middle combs of solid brood next to the outside, uncapping the honey in the outside combs, and placing them in the center, at the same time uncapping all drone brood, with an occasional patch of worker brood. He has had as few as three swarms from 83 colonies. He is now establishing out-yards; expects to run 500 colonies the coming season for comb honey, and he says that this plan of management will save all trouble from swarming. I don't give his name, as there is no permission in his letter that I may print it.

A Bee Keepers' Spring Poem.

The nearest approach to a spring poem that I ever wrote, is a letter to my brother Elmer in Northern Michigan. There is nothing so very remarkable about it, but it shows how the bees have wintered, and how they are prospering under the influence of this earliest spring that I ever knew. Here is a copy of one of the weekly letters that go to Northern Michigan:

FLINT, Mich., April 18, 1910.
Bro. Elmer:—

Until today I had not opened the hives for a week or ten days. This

afternoon I examined a few colonies, and there was a surprise in store for me. Some of the colonies have six combs jammed full of brood, with lots of young bees hatching out. You know, after a colony has brought out its first "hatch," and the young bees have hardened off a little, it seems to be able to endure almost any kind of weather. It seems to me as though almost every colony of bees that I have ever lost in the spring, had just about reached the point where their first brood was ready to hatch. If they could have held on another week, they would have pulled through. You know I told you that the colonies were all strong in bees, had plenty of stores, and that I had protected them with sawdust packing all around the sides, and on top; well, when I turn back a quilt, a puff of warm air comes up that I can actually feel in my face—just as the warm air comes up in the registers of a hot-air furnace. The hives are actually full of bees.

Of course, I must watch out now about stores, as they disappear as by magic when such quantities of brood are being put up. I have quite a lot of sealed combs left. By the time that they are gone, I can feed sugar syrup if necessary. Fruit trees and dandelions are beginning to blossom, and, if this warm weather continues, it fairly staggers me to think what I may accomplish this year with 40 such colonies, plenty of empty combs, foundation, queens and feeding.

Virgil Weaver prognosticates a bumper crop this year from clover. Well, let her come. This world can't all be ill-luck. I was so full of enthusiasm that I just had to sit down and write this; I don't know as it was really necessary, but I felt as though I had got to talk to some one who could appreciate the situation.

WILL.

The Jones Plan of Swarm-Prevention.

Of course, it is yet too early to try non-swarming plans here at the North, but down near the gulf of Mexico such things are in style. Here is part of a letter from Mr. Menhall, of Mississippi, who keeps his bees on the roof of his floating photographic gallery, as described in the Review a year or two ago. Here is what he says:

Have tried Dr. Jones' plan of swarm-control on two colonies, and it works just as he says—but, but. I am inclined to believe it is a two-edged sword.

May be all right for the comb honey producer with a 30-day flow; yet, I doubt that very much; as I notice that the majority of the worker bees bring in pollen principally for 10 or 12 days after treatment. On the other hand, this might be a good thing when brood combs are pollen-clogged. I am sure the plan will never be popular with the bee keeper who expects a 30-, yes, maybe a 20-day flow, or longer, after treatment, where the swarming season is long, as it is here in the South. It is too expensive in bees—in larvae that would be nurse-bees at the very time *they are needed* to handle and ripen the incoming nectar.



Shallow Extracting Combs.

A subscriber asks if there are any advantages in shallow supers after the weather has become warm, as in summer. He asks, especially, if the bees will fill two, half-depth supers any sooner than one full-depth super. I doubt it. There is undoubtedly some advantage in shallow supers at the opening of the season, but when the colony has become very populous, the weather warm, and the honey flow good, I can see no advantage in the shallow super.

This same subscriber asks about the use of artificial heat in the spring to secure the drawing out of foundation as recommended by Simmins. I have never tried it, but I believe that all attempts at the use of artificial heat, in the spring, in this country, have resulted in failure. Early in the season it is best to make haste slowly.

Still further, my inquiring friend would like to know if more honey would be stored in an extracting super with the frames filled with foundation, than in sections filled with foundation. I think so; simply because the bees can work to better advantage when in a large mass than when broken up into small clusters as in a comb honey super.



Improvement in Stock.

The one apicultural field left nearly untrodden is that of improvement of stock. None holds out greater rewards

for the efforts put forth. This is proven by the wonderful yields secured by the few enterprising men who have ventured into this fertile realm. Several times in my life have I seriously considered the idea of developing a superior strain of bees. I know that it would require years of careful, patient, persistent work in the way of selection, crossing, testing, etc., and there have always been too many other irons in the fire—probably always will be. A few months ago Mr. M. V. Facey suggested, in the Review, that some practical honey producer give the different strains a thorough and extended trial, reporting upon their various characteristics, and now comes to me a letter from an old queen breeder, one who has bred queens for 25 years, but is now out of the business, suggesting a slightly different plan. He said that I might publish what he wrote, but he did not care to have me give his name.

He suggests that five, or more, honey producers, each send their best queen, or, at least one whose colony stored surplus above the average, to some bee keeper who could isolate this stock. He would have queens shipped in nuclei. This bee keeper is to be paid for rearing and sending a certain number of queens to each one furnishing the stock. No outsider to be furnished queens until the original members had received all that they wished. Each member is again to select the best, if any, out of the lot, and return it as soon as possible for breeding. The second season it would be possible to select queens of exceptional merit early enough in the season to have queens reared from them and shipped in September of the same year.

The members would, of course, be constantly on the watch for a queen good enough to send in to this breeding station, which would thus be constantly supplied with only record-breaking stock, and queens from this yard could not fail to improve the stock of the apiary into which they were introduced.

My friend writes that a trial of the above plan on a small scale makes him very sanguine that excellent results might be secured by a number of honey producers thus combining their interests and working together with improvement of stock as their sole aim—not the number of queens that can be reared. The man who does the work should not be dependent for his living upon the queens that are sold.

The reading of the above just makes my blood tingle. How I would enjoy establishing just such a breeding station. Sometime—who knows? In the meantime, if there is some one else so situated as to take up the work, let him speak out. The Review stands ready to do all in its power to make a success of such a scheme.



Working for Increase—and Some Honey.

Mr. S. P. Taylor, of Boyd, Wisconsin, writes me as follows:

I am going to take your advice to "keep more bees," and I would like your advice as to how to get them. If you had 25 colonies in eight-frame, Langstroth hives, 25 extra set of combs, 30 pounds of foundation, and wanted to increase to 100 colonies, how would you proceed in a white clover locality, where, in some seasons, there is some basswood, willow herb and goldenrod? Do you think it would be necessary to feed for winter? Would you rear queens, or buy them?

My friend's problem is almost exactly the one that I expect to work out the coming season. I now have 40 strong colonies, with plenty of honey in the combs. The spring has been unusually early, and they have a lot of brood started. That this may not be injured by some late freeze I have packed the colonies, lightly, with tarred felt and sawdust—on the sides and on top. After fruit bloom is gone, if much sealed honey remains in the hives, I shall probably uncap some of the outside combs. If there is any need for it I shall certainly feed between fruit bloom and clover. If a colony has plenty of bees and stores

and a queen, and is protected against the changes of weather, the best thing to do in early spring is simply *let it alone*. After warm weather has come, and everything is booming, then matters may be pushed for all there is them. Stimulative feeding is all right then.

I expect to buy queens from the South for the first lot of increase that I make, which will probably be sometime this month. The old queen, a comb or two of brood and bees, perhaps one of honey, will be left on the old stand, the hive filled out with empty combs, and the old queenless colony given a new stand and the new queen. For future increase queens will be reared, fertilized in nuclei, and when nicely laying I shall simply change places with a nucleus and some strong colony. The empty combs will be used first, as foundation is drawn out to better advantage during a honey flow in hot weather,

I shall make my increase first—to about 150 colonies, as that is about all that my cellar will hold. After the increase is made, future operations will depend entirely upon the season. I shall have in readiness an upper story for each colony, the frames being wired and filled with medium brood foundation. If the honey flow continues, as often as I find a colony strong enough I shall put on an upper story, raising half of the combs from the lower story, thus the two stories will contain both combs of brood and honey and sheets of foundation, placed alternately. At the close of the honey flow, I shall confine the queen to the lower story by means of an excluder. At my convenience, later in the season, after the brood in the upper stories has all hatched, I shall remove the upper stories. I shall sort out and save two full combs of honey for each colony. This honey will be kept over until next spring to use in supplying any colonies that may be short of stores. For *early* feeding nothing equals a full comb of honey. If there has ever been a time when I have taken solid comfort, derived

downright satisfaction from an act, it was this spring when, in looking over my colonies, I found one short of stores, and simply hung in two solid combs of honey and said "There, that ends that."

Whatever honey is left after saving out these spare combs will be extracted. Any colonies found short of stores will be fed. With me, the work of doing this is no more than would be that of sorting over the combs and putting in those heavy with honey, while the sugar syrup is cheaper, and, really, superior, as a winter food.

An Explanation—No Intention of Criticising the Detroit Convention.

It will be remembered that I expressed surprise last month because Bro. York of the American Bee Journal included the Detroit convention among those that were poor from lack of work on the part of the Secretary. I felt sure, at the time, that there was a mistake somewhere, and the following letter is just about what I expected to receive:

W. Z. Hutchinson,
Flint, Mich.

Friend W. Z.:—I notice what you have to say on page 117 of the April Review. Your position is all right. Of course, I was wrong in including the Detroit convention, as that meeting was a fine one, and you, as Secretary, certainly did your part well. The fact is, however, that the San Antonio meeting, the one at Harrisburg, and the one at Sioux City, were not what they should have been, especially the last two mentioned.

I am not certain that the reporter at Sioux City got down what I said exactly as I said it, but you may be sure I did not intend any reflection upon yourself, as to the Detroit convention, for that was a well-planned meeting, and you got out perhaps the best and most elaborately printed program the National convention ever had. I am glad to apologize to you for including yourself in the criticism referred to, for, as you say, I would not knowingly and intentionally misrepresent. Of course, you were at the Detroit convention as everybody else knows who was there.

Very truly yours,
GEORGE W. YORK.

Selling the Honey Crop to the Best

Advantage.

"Did you ever stop to think that you spend all of your season producing your crop of honey, and then sell it in about fifteen minutes?" I came across the foregoing sentence in a circular just sent out by the energetic, enterprising secretary of our Michigan, State Bee Keepers' Association. It is true that we bend every energy to the successful wintering of our bees; we make chaff hives, or protect the bees with some kind of packing, or we put them in the cellar and then watch the temperature as a mother watches her sleeping child; we feed the bees in the spring if they need it; we coax them into the supers by means of "bait" sections; we lift and sweat and suffer stings; and, finally, crate up our beautiful product with loving care; and then, as Bro. Tyrrell says, some of us sell it in about 15 minutes.

The indifference exhibited by some producers in disposing of their crop is certainly exasperating. We can't all peddle our honey; we can't all sell it to retailers; we can't all build up a mail order trade; some of us must sell to wholesale dealers, or consign to commission men; but, in any case, there is no excuse for the lack of interest, the indifference, the "I'll-take-whatever-you'll-give-me" spirit.

In other lines of business, production is looked upon as only one-half the problem. Selling-plans are studied over, worked out, prosecuted, and regarded as of as much importance as those of production. For each bee keeper there is some particular plan of selling honey that is best for *him*. It is quite likely that many men are now following the plan that is best for them; but it is equally evident that thousands of men are not; men who might materially increase the revenue from their crops of honey by some change in their plan of selling; or by giving more care and thought to the plan already

employed. The majority of bee keepers are good producers. That end of the business has been studied from every possible point; but the selling-end has been shamefully neglected. As already remarked, not every producer can become a successful retail salesman. A man might possess the necessary, personal requisites, but other circumstances might not favor the plan. A Western bee keeper who produces comb honey by the car load says that the most profitable plan for him is to sell his honey all in a lump, and then turn his undivided attention to the production of another crop. This is undoubtedly true; but I notice that he always gets the highest, wholesale market price. He investigates, studies the markets, crop reports, etc., and no buyer gets his crop for less than its value. Right in this line it is safe to admit that men who are now *retailing* their honey might find it much more profitable to increase their production until it reached the car load stage, abandon the retail trade, and turn their whole attention to production. In short, selling should be only a *part* of a plan that is the most perfect for some particular man and his environments. What I am pleading for is the proper recognition of the importance of the selling-factor. Let each man most thoroughly study himself and his surroundings. The wholesaler may find it to his advantage to develop a trade among retailers, and the man who sells to retailers may find it to his profit to retail his crop to actual consumers. Of late, many producers have developed a mail order trade that is very profitable and satisfactory. And so it goes. The great difficulty is the heedless, thoughtless, manner in which so many honey producers keep on selling their honey, year after year, in the same old way, with no thought as to whether this plan is best for them or not. Right here let me give an illustration: Last winter I visited a bee keeper who each year produces from 10,000 to 20,000 pounds of extracted

honey. About half of his crop is white honey, the other half is dark. There was no difficulty in selling his white honey at wholesale for a good price, but it always hurt his feelings a little to let the dark honey go at such low prices as he was offered. Finally he tried putting up some of the dark honey in pails of such a size that he could sell one for a dollar, and realize about eight cents a pound for the honey. He loaded up his cutter with these pails of honey and started out among the farmers, where a surprise awaited him. It seemed as though those farmers were just waiting for him to come along and offer them the honey. Then he tried going into a small village, where he found he could sell the pails of honey almost as fast as he could hand them out. It was not unusual for him to sell several dozens of pails in a day. The honey was all gone before he scarcely knew it. This may be an exceptional case, but it shows what *can* be done. The most important point, the beginning, the foundation, of this profitable change in marketing, was to *think* of it. That is what I am writing this editorial for, to set my readers to thinking upon this all-important subject.

Perhaps I ought not to criticize too severely, as market conditions are vastly superior to what they were years ago, and are continually improving. I can remember when about the only way to sell honey was to consign it, and then wait weeks, perhaps months, for it to be sold. Extracted honey was practically a drug in the market. Now, salable honey can be sold for spot cash any day in the year. Co-operation has helped wonderfully in a few localities by securing lower freight rates and higher prices. Unity of action in regard to prices in a certain state or territory helps greatly in holding up prices. White extracted honey may be worth ten cents put up in 60-pound cans, but, if a few bee keepers are offering it at eight cents, it is difficult to hold the price up where it ought to be. The

Ontario, Canada, bee keepers have taken a step in the right direction towards securing uniformity of prices. They have a committee whose duty is that of gathering crop statistics, studying market conditions, and deciding upon what is considered a fair price for the different grades of honey. This scale of prices is not binding upon any one, but it furnishes a basis upon which to establish prices. The buyer says "What do you ask for your honey?" Often, I might say, usually, the ordinary bee keeper doesn't really know how much he ought to ask for his honey, but how easy for him now to say "The honey committee decided that we ought to have ten cents for our white extracted honey." This plan helps to give confidence to the buyer, as he feels that some competitor will not be likely to buy much, if any, honey at a lower price than that set by the committee. At our last Michigan, State Bee Keepers' convention, it was voted that the executive committee should meet early in the fall, take into consideration the production of honey for the season, the conditions of the markets, and then advise each member as to what, in their opinion, would be a fair price for their honey.

The quality of the honey, and the manner in which it is put up, while not coming under the head of marketing, have a wonderful bearing upon its sale. If bee keepers could only see the dealer's end of the marketing problem it would open their eyes. Some of them would understand why their honey was of slow sale at a low price. I think there are few bee keepers whose methods of preparing their honey for market would not be improved by working one season in some house that deals largely in honey.

Returning again to the marketing question, the time was when low prices were laid to the bee keepers all rushing their honey into the city markets at once, at the close of the season, thus causing a glut, and the bee journals all united in advising the holding back of the crops

until the rush was over. It is possible that such a condition did obtain years ago, but it is far from being true at the present time. As a rule, the man who "gets left" now is the one who holds his honey until after the holidays. Of course, prices may go up or down as the season advances, and it is difficult to always sell at the time of highest prices, but I think Mr. Facey of Minnesota, gives the best advice on that subject. He says that when the price is above normal, and going higher, *sell*. If it is below normal, and falling, hold on. The theory is that prices tend towards the normal. If unusually high, they are likely to drop; if too low, they will come up again.

Last year there was a short crop of honey, and I see, by looking over the reports, that the markets are practically bare of honey; with prices pretty well up. The first honey on the market will probably meet with ready sale at a good price. Perhaps prices can't be raised this year, but I certainly think that they ought to be maintained, considering the high prices at which other commodities are sold. Of course, the size of the crop that is harvested will have a great bearing upon prices. Virgil Weaver prognosticates a big crop this year from clover, and I'm inclined to his belief, but the extent of the Western crops will also have an influence. Certain it is that the man who puts his crop on the market early this year will not make a big mistake.

The Review is published to help its readers make of their business a more safe, pleasant and profitable pursuit, and if it can aid them in getting a higher price for their honey it will be fully as helpful as in teaching them how to produce larger crops. I wish that every subscriber who feels that he has solved the marketing problem, or that he has partly solved it, or can offer any suggestion, would write it out for the Review. I am ready to pay, and pay liberally, for anything of value on the marketing question.

Selected Articles.

AND EDITORIAL COMMENTS.

PROGNOSTICATING THE HONEY-FLOW.

The Yield from White Clover Comes from Plants Started the Previous Year, Hence a Drouth Means no Honey the Next Year.

To Virgil Weaver of Richmond, Kentucky, belongs the honor of having observed and reasoned until he discovered that the crop of honey furnished by white clover comes from plants that start from seed the previous year; hence, a drouth that prevents the germination of the seed and the proper growth of these young plants, means no honey the succeeding year. For several years he has been watching the weather conditions, especially the amount of rainfall, in the different sections of the clover belt, and then prognosticating the honey flow for the next year. So far, he has not failed. In a recent issue of *Gleanings*, he gives a little history of his making of this discovery, and also tells us that we may look for a bumper crop this year. Here is what he says:

I began bee keeping in 1893. I had read Root's *A B C*, Doolittle on queen-rearing, the bee journals two years, and had studied bees nearly all my life. I ordered 25 hives from the Root Co., and purchased ten colonies of black bees in box hives; transferred them to eight-frame hives and patiently waited for the honey flow. Very little clover showed up; no honey was harvested; so by studying the bee periodicals closely I came to the conclusion that the clover had winter-killed. When 1894 came I had 17 good colonies. We had a very mild winter, so I felt pretty sure that the honey flow would be good. The conditions in the spring being very favorable for the growth of white clover, I could not see

why the honey failed. Then 1895 and 1896 gave the same results. Four failures in succession reduced my bee fever to the 80's, and I was just about ready to give up. One thing I had noticed was that, preceding each of the years mentioned, it had run from very dry to moderately dry, especially in July and August. The year 1896 changed the program exactly. We had a dry spring; July gave a rainfall of 8 inches; August more than 6, and September was little better, giving about 5 in. The winter following was about normal; the spring of 1897 was very favorable, and the honey secured from white clover averaged 150 lbs. per colony. The year 1898 gave 100 lbs. per colony, and 1899 gave 300 lbs.; the winter of 1898 was the coldest on record in my locality, zero weather extending into March, freezing and thawing continually. This 300 pound yield after so severe a winter was a little contrary to the teaching of most of the old bee keepers, and right here I began watching for the combination that it took to make a honey flow from white clover. Prior to this time I shared the opinion of other bee keepers, that conditions are nearly always normal for a yield from white clover on Nov. 1, and that the winter months virtually control the honey flow. But by watching very closely, and also studying Weather Bureau statistics, I have learned that, if white clover is in a normal condition Nov. 1, it is also in a normal condition April 1, and that the winter months have no more to do with the white clover honey flow than Adam's off ox.

On May 9, 1907, I wrote an article for this journal, telling the bee keepers of the northern part of the white clover belt that there would be nothing doing in the white clover line that year, but that in my locality, and the southern part of the white clover belt, our prospects were good for a flow. That year I sold 22,000 lbs. of honey from 180 colonies of bees. To bear my former statement out, N. E. France said that he could count on his fingers all the parties who had a honey flow that year. In the

spring of 1908 I made no honey forecast, because, being located on the southern side of the white clover belt, I was hopeful of getting some of my honey off at the high price before the deluge came from the North—something I was mistaken in. In February 1st Gleanings, 1909, I had another article, telling the bee keepers that east of the Mississippi River there would not be a tenth of a white clover crop that year; but didn't Miller, Root, Doolittle, Hand & Co. do me up! What was the result? The editor, after bringing in Canada, which gave a yield from alsike clover, and including all the alsike and sweet clovers and basswood honey, said there was from 25 to 50 per cent. of a white honey flow. Now, if you will except the above named sources it is a serious question in my mind whether there was a single carload of surplus white clover honey gathered from the Mississippi to the Hudson River.

Now I have a different story. Instead of no honey, I want to say that there will be a bumper crop this time in most of the clover belt east of the Mississippi River. When I say "white clover belt" I mean those localities where white clover grows spontaneously. The best of these localities are the Blue Grass sections of Kentucky, Ohio, Indiana, Illinois, Missouri, Iowa, Southern Minnesota, Southern Michigan, and Southern Wisconsin—Iowa and Northern Illinois being the heart of this belt. Draw a line from Dubuque, Ia., to Springfield, Ill., thence to Indianapolis, Ind., thence to Louisville, Ky., thence south; in nearly all the white clover belt east of this line the white clover is in a normal condition, i. e., a crop of white clover started from the seed in the spring of 1909 which grew continually, caused by a surplus of rainfall, and, under favorable conditions, will produce one of the largest honey flows on record in 1910. The honey crop for 1910 now depends on normal rainfall and sunshine after May 15, not on the amount of snowfall or freezing and thawing we have during the winter months. The snow helps in just this way: It leaves the ground with plenty of moisture in it in the spring, thus inviting more moisture when the clover has got to have it. The condition west of this line is just this. The clover here was cut off from moisture about July 10 and has set only a moderate amount of embryo blossoms to bloom this year; and the best that can be hoped for in this section is a moderate yield. The reason that I say this is that July and August are the

most important months in setting embryo blossoms for next season's crop of honey; and the greater the rainfall in these months the larger amount of embryo blossoms set. At this period the other grasses are taking a kind of rest. Blue grass has set its crop of seed; the meadows have been shorn by the mower, and have not started yet on a new crop of fall growth, thus giving a crop of new white clover a chance to spread itself, which, with plenty of moisture, it certainly does to a king's taste. In a great many places of this section the rainfall almost vanished after July 10—Cairo, Ill., for example, giving but a trace of rain for August. West of the Mississippi and south of the Minnesota line, conditions are not very favorable for white clover honey. Iowa is hit hardest, as there are whole counties in that State that will not produce a pound of surplus white clover honey this year. I have no government data covering Missouri and Kansas; but through an unofficial source I have learned that a good part of these States were hit hard by fall drouths in 1909, there being about seven weeks without rain, beginning July 10, in large areas of this section. In Missouri, as there was no honey last year to speak of, and where the rain fall was excessive until July 10, there ought to be some honey this year. I want the snow-honey fellows to watch Iowa this year. The ground there in most parts of the State has been covered with snow since Dec. 1, and I say that there will not be half a yield from white clover in that State in 1910. Snow does not set embryo clover blossoms. It takes a temperature from 75 to 90 degrees, and from three to six inches of rainfall per month to do the work.

I will now tell what kind of weather we need to make a bumper crop of honey in 1910. As I have said before, wherever the clover is in a normal condition Nov. 1, it will be in a normal condition April 1. To get best results after April 1, could I have my own way in my own locality I would have good rains to soak the ground thoroughly as soon as warm weather comes, the last rains to be May 1; then I would have three weeks of dry weather—this to make the clover fill the ground with feeders to gather plant food and moisture; then I would have good rains to soak the ground thoroughly again; also as much as an inch of rain every eight or ten days; then we would see the greatest yield from white clover that any combination of circumstances could make.

Now, it may happen that, where the clover is not in the best condition now, conditions will be good for a honey flow; and where conditions are most favorable now for a lack of or from too much moisture, it may cut the honey flow short, but taking conditions as a whole, to have clover in a normal condition Nov. 1 is five points out of ten in securing a honey flow.

In speaking of a normal condition for white clover, there are two conditions where clover is in a normal condition, one which occurs but about one year in five. It occurred in my locality in my 17 years of bee keeping as follows: 1897, 1902, 1906 and 1910. At Dr. Miller's it occurred 1897, 1903, 1908 and 1910. Now, as it will be two or three years before this condition can occur again it makes it for the two locations about one year in five as stated above. This condition is a crop of white clover, the greater part of which has started from the seed the year previous, and has covered the ground thoroughly with plants that are in the best condition that it is possible to put them in. These are the plants that, under normal condition, in the best of the white clover belt, will yield honey for three months. The other condition, which is also a normal one, but which at Dr. Miller's, or, in fact, all the best of the white clover belt, will not produce under the same climatic conditions more than half as much honey as the condition first mentioned. It is where these plants started from the seed in 1909, and have developed a greater part of their blossoms in 1910. Then these plants set new plants from their runners, and these new plants set new embryo blossoms that blossom next year, but the bloom period being about half as long the second year as the first. This will continue for a year or two, then they fall down from overcrowding or drouth. In my locality clover never fails from overcrowding. As I am on the extreme southern side of the white clover belt our soil is not as strong nor as well adapted to white clover as it is north. There is no combination of circumstances in my locality that will make white clover yield honey later than July 10, while in the best of the clover belt it will yield honey for three months or more.

It will be noticed that a good growth of young plants on a certain year does not absolutely insure a crop the succeeding year; that is, unfavorable weather may prevent the secretion of a

crop of honey, even though the plants made a good growth the previous year; but, if a drouth prevents the growth of the plants in the first place, then there are no plants, and, consequently, no honey.



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Bees For Sale

I didn't intend to sell any bees this spring. Instead, I expected to buy more. I probably shall buy some any way—get them of farmers, and transfer and Italianize. Every spring, for several years, I have sold bees, hence, inquires come every day or two asking if I will sell any this spring. So far, I have said "no." There is only one thing that would induce me to sell, and that would be the price. The bees have wintered exceedingly well, have plenty of stores, and have started a lot of brood. The colonies are unusually strong; and, as I stood looking at them the other day, flying so merrily, and filling the air with their joyful hum, the thought came to me, if a man should come along and say, "Hutchinson, I'll give you \$400 for the lot," (40 colonies) I would be tempted to take it; and yet I feel sure that they would bring me in that much money, and I would have the bees left. Honestly, I would not care to sell a colony for less than \$10.00. If any one cares to pay that much, I'll let a colony go.

The bees are pure Italian, of the Moore strain; the hives new, ten-frame Langstroth; the combs built on wired foundation. There are plenty of bees, brood and stores. I can think of nothing that would make colonies more desirable. Safe arrival in perfect condition guaranteed.

W. Z. Hutchinson
Flint, Mich.

Advanced Bee Culture

Is a book of 230 pages—size of page the same as those of the Review. The paper is heavy, enameled book. The pictures are simply incomparable with others in the same line. As Dr. Miller says "they are what might be expected from one **almost daft** in that direction."

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Price of the book, \$1.20, or, with the Review one year for only \$2.00.

W. L. Hutchinson, Flint, Mich.

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We will make you delivered prices by return mail, on anything you may want for your apiary.

We Manufacture

Dovetailed Hives, Hoffman Frames. Sections, Separators, Shipping Cases, etc. Also Berry Boxes and Crates.

There Are No Better HIVES Than Ours.

Prices the Lowest. Satisfaction guaranteed, or money refunded.

Minnesota Bee Supply Co.
Nicollet Island
Minneapolis, Minn.

You are a Bee Keeper

So am I

Then in that respect you and I think about the same. All bee keepers are nature lovers—and some are devoted students. Then you and I meet again in that class.

Therefore, as you and I are so much alike, a magazine that I make in the fashion that suits me will fit you also. I make

The Guide to Nature

and will send you a copy for 10c. Then you can judge for yourself whether I am right in all these surmising and theories.

Edward F. Bigelow

Apiarian Laboratory
Arcadia, Sound Beach, Conn.
2-10-6t

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

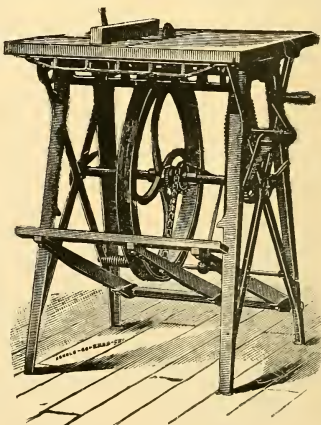
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

381 Ruby Street
Rockford, - Illinois



Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—We quote as follows: Fancy white comb honey, 16 to 17c; No. 1 white, 15 to 16c; fancy white extracted, 9 to 10c; light amber, 7 to 8c; beeswax, 32c.

BLAKE, LEE CO.
4 Chatham Row,
Boston, Mass.

Mar. 10, 1910.

KANSAS CITY—Our market is entirely bare of comb honey, consequently no quotations to make. White extracted, 6½ to 7c; beeswax, 25 to 28c.

C. C. CLEMONS & CO.
Kansas City Mo.

April 15, 1910

CHICAGO—Trade is meager in comb and only fair in extracted. We quote as follows: Fancy white, 18c; No. 1 white, 15 to 16c; fancy amber, 11 to 12c; No. 1 amber, 9 to 10c; fancy dark, 9c; No. 1 dark, 8c; white extracted, 7 to 8c; amber, 6½ to 7c; dark, 6c; beeswax, 32c.

R. A. BURNETT & CO.
199 S. Water St.

April 15, 1910

DENVER—We quote our local honey market as follows: No. 1 white, per case of 24 sections, \$3.30; No. 1 light amber, per case, \$3.15; No. 2, \$3.00; white extracted, 7½ to 8½ cents; light amber, 6½ to 7½ cents. We pay 24 cents per pound for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASSN.
F. Rauchfuss, Manager.

Sept. 22, 1909

Denver, Colo

TOLEDO—The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.,
Feb. 19, 1910. Toledo, Ohio

CINCINNATI HONEY MARKET The demand on all grades of honey is easing up as the weather grows warmer. Fancy comb is selling at 16c and 17c per pound by the case from the store. Extracted extra fancy, table honey, is selling at 9½c per pound and white at 8c per pound in 60 pound cans. Amber honey in barrels at 6c and 7c, according to the quality and quantity bought. For beeswax we are paying 29c cash delivered here, or 31c in trade if it is nice bright yellow free from dirt.

THE FRED W. MUTH CO.
April 15, 1910. 51 Walnut St. Cincinnati, Ohio

NEW YORK CITY—There is practically no trade in comb honey at this time. Stocks are fairly well cleaned up, and we do not expect that very much will be carried over. There is some little demand at the following prices: Fancy and No. 1 white, 14 to 15c; No. 2 white, 12 to 13c; dark, 9 to 10c. Extracted in fair demand, with sufficient supply from all over. We quote: California white, 8 to 9c; light amber, 7 to 7½c; alfalfa, light, 7 to 7½c; Southern in barrels from 60 to 75c a gallon, according to quality. Beeswax steady at 30c.

HILDRETH & SEGE KEN
April 16, 1910 265 Greenwich St.

WANTED—150 colonies of bees.
3-10-11 H. L. SOPER
112 Thompson Ave., Jackson, Mich.

We are Headquarters for

ALBINO BEES

The Best in the world. If you are looking for the bees that gather the most honey, and are the gentlest of all bees to handle, buy the Albino. I can furnish the Italian, but orders stand fifty to one in favor of the Albino. I manufacture and furnish supplies generally. Circulars free. Address

S. VALENTINE

Rocky Ridge, Frederick Co., Md.

4-10-31

Golden and Red Clover Italian Queen Bees

Our Golden and Red Clover Italian Queen Bees are as good as they are beautiful. Our long-tongued red clover stock is as good as the best. Queens sent by return mail in the season. Select, untested queens, \$1.00 each; three for \$2.75; six for \$5.00; one dozen, \$9.50; tested, \$1.50; select tested, \$2.00. Let me send you my descriptive circular of queens, nuclei, bees by the pound, etc.

5-10-31

VIRGIL SIRE, North Yakima, Wash.

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

Save Queenless Colonies.

Introduce vigorous, tested queens. We can supply such queens by return mail, at \$1.00 each. These are healthy, prolific, Italian queens, reared last fall, and wintered in four-frame nuclei. There are none better. Prompt attention given to all orders, and satisfaction guaranteed. Send for price list.

4-10-11

J. W. K. SHAW & CO., Loreauville, La.

Root Automatic Extractors



No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$23.00

No. 27—Four-frame Root Automatic for frames not over 11 $\frac{1}{2}$ in. deep, 34 in. in diameter (weight 210 lbs.) 27.00

No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00

No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00

GASOLINE ENGINE with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

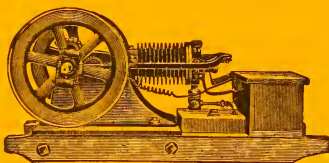
We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of

labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



The A. I. Root Company, Medina, Ohio

JUNE, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 247.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, June 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Hand's HANDSOME HUSTLERS

Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, \$1.00 each; six \$5.00; dozen, \$9.00. Tested, \$1.25; six, \$6.50; dozen, \$12.00. Three-frame nucleus, without queen, \$3.25; add price of queen wanted. Don't take chances. Get the real thing. Send for circular.

J. E. HAND

Birmingham, Erie Co., Ohio.

Clubbing List

I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1.75
American Bee Journal, (new)....	(1.00).....	1.75
Canadian Bee Journal.....	(1.00).....	1.75
Ohio Farmer.....	(1.00).....	1.75
Farm Journal (Phila).....	(.50).....	1.20
Rural New Yorker.....	(1.00).....	1.85
The Century.....	(4.00).....	4.50
Michigan Farmer.....	(1.00).....	1.65
Prairie Farmer.....	(1.00).....	1.75
American Agriculturist.....	(1.00).....	1.75
Country Gentleman.....	(2.50).....	3.15
Harper's Magazine.....	(4.00).....	4.10
Harper's Weekly.....	(4.00).....	4.20
Youths' Companion..... (new).....	(1.75).....	2.35
Cosmopolitan.....	(1.00).....	1.90
Success.....	(1.00).....	1.75

IF YOU WISH FOR NEAT, ARTISTIC

Printing

HAVE IT DONE AT THE REVIEW OFFICE

Golden Italian Queens.

All cells built in strong queenright colonies. No disease has ever been known here. Tested queen, \$1.00; select tested, \$1.25; untested, 60 cts. each; one dozen, \$7.00. 6-10-2t

D. T. Gaster, Rt. 2, Randleman, N. C.

I am better prepared than ever to furnish promptly my famous strain of

Yellow Goldens

I honestly think that they meet the requirements of business-bred queens. If your locality has any raw nectar that you would like converted into honey, let me say that these bees never stop until the last drop is safely stored away.

Prices are as follows: One untested queen, 75 cts.; three for \$2.00; ten for \$6.00. Tested queens, \$1.00 each; extra large, yellow and prolific, \$2.50 each. 6-10-2t

W. S. McKNIGHT, Elamville, Ala.

Queens of Moore's Strain of Italians

Produce workers that fill the supers, and are not inclined to swarm. They have won a world wide reputation for honey gathering, hardiness, gentleness, etc.

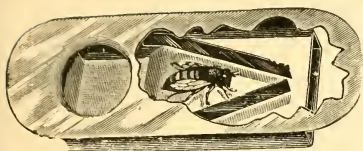
Mr. W. Z. Hutchinson, editor of the Bee Keepers' Review, Flint, Mich., says: "As workers, I have never seen them equalled. They seem possessed of a steady, quiet determination that enables them to lay up surplus ahead of others. Easier bees to handle I have never seen."

My queens are all bred from best long-tongued, three-banded, red-clover stock (no other race bred in my apiaries) and the cells are built in strong colonies, well supplied with young bees.

Prices: Untested queens, \$1.00 each; six, \$5.00; dozen, \$9.00. Select untested, \$1.25 each; six, \$6.00; dozen, \$11.00. Select tested, \$2.00. Extra select tested, \$3.00. Breeders, \$10.00.

Safe arrival and satisfaction guaranteed. Descriptive circular free. Address

**J. P. Moore, queen-breeder, Rt. 1
Morgan, Ky.**



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

Italian Queens

By Return Mail. Bright, Golden and Red
Clover Stock, Bred for Beauty
and Business

Select Untested in May, \$1.00 each, or six for \$5.00. Tested, \$1.50 each. After June 1st, 75 cents each; three for \$2.00, six for \$5.75 or \$7.00 per dozen. Tested \$1.00 each. Nuclei on two frames (Hoffman or Danzenbaker) with young queen in May, \$3.00; after June 1st, \$2.50. Safe delivery guaranteed. Circular for 1909 ready. Send for one, it will interest you.

Geo. W. Barnes

3-08-tf

Box 340, Norwalk, O.

3 HONEST OPINIONS

NOBODY GETS STUNG
WHEN HE IS WISE ENOUGH TO USE THE DANDY
MUTH IDEAL BEE VEIL

"IT'S THE BEST ON THE MARKET"—DR. D. EVERETT LYON, ALLENDALE, N. J.

"IT IS A VERY GOOD VEIL"—MR. W. T. FALCONER (MODEST BUT DECIDED)

"IT'S THE VEIL"—MR. FRANK RAUCHFUSS, DENVER, CO.

AND IF TEDDY HAD HAD ONE WITH HIM IN AFRICA, HE WOULD SURELY HAVE BEEN "DE-E-E LIGHTED"

You need this veil more than you do the 75c it costs, delivered. And why are you waiting to ask for our catalog of bee supplies? It's free.

THE FRED W. MUTH CO.,
"THE BUSY BEE MEN"

ST WALNUT STREET
CINCINNATI, O.

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.

Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,

Canajoharie, N. Y.

AS USUAL

Franklin, Tenn., Feb. 19, 1910.
Mr. C. H. Weber,
Cincinnati, Ohio.

Dear Sir:—Your consignment has arrived all O. K., and I find everything I ordered. I wish to extend many, many thanks for your promptness and fair dealing. All future orders will be sent to you. Very truly yours,

W. A. MOORE.

I want you to notice four things in the above letter

1—The goods reached Mr. Moore O. K. We know how to pack carefully and securely, and without useless weight.

2—He found everything ordered. We carry large stocks always on hand, and our system of checking prevents annoying mistakes.

3—The advantages we have for prompt delivery are unsurpassed. If you want goods quick, send to Weber.

4—Fair dealing is now and always has been our motto.

Catalogs have been mailed to nearly all our customers. If you have not received yours send us a line, and we will get one to you by return mail.

C. H. W. WEBER & CO.,
2146 Central Ave. Cincinnati, O.

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.

Jamestown, N. Y.

Quick Deliveries

The month of May is an important one in the bee keeper's calendar. You must get your supplies now if you expect to make the most of the bountiful harvest before us. My facilities are unequalled for supplying goods promptly.

Sections

I handle the best grade of sections made. If you want a hundred or ten thousand or a hundred thousand, I can fill your order promptly with goods which are bound to please. You may judge of the popularity of the sections I sell when I tell you that the manufacturers made upward of twenty-five million of them last season.

Foundation

There is nothing more important to the up-to-date bee keeper than to have foundation just when he needs it, and of the best quality. I sell nothing but Weed-process Foundation, the recognized standard of the world. The bees appreciate the good points of this foundation, and every bee keeper knows that it is the best. All grades and sizes constantly on hand. A pound or a ton, just as you like.

C. H. W. Weber & Co.

2146 Central Ave., Cincinnati, O.

Only 25c Per Case.

60-lb. empty tins, two to a case, used but once, as good as new.

C. H. W. WEBER & CO., Cincinnati, Ohio

6-10-11

DO YOU CARE

Where you buy your Queens? You certainly do. Send a postal for prices of the two best strains of their kind on this Continent, Italian and Caucasian.

A. D. D. WOOD, Box 61, Lansing, Mich.
5-10-11

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queen, in May, \$1.10; tested \$1.50; select tested, \$1.65; breeder, \$2.75. One-comb nucleus, \$1.15. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for sample of comb foundation. 5-10-11

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

We will pay 30c a pound, delivered
New York for choice quality pure

BEESWAX

Until further notice. Alfalfa honey, new cans and cases, fancy light, 8c a pound, fancy amber, 7c a pound, f. o. b. New York, in not less than five case lots. Will shade prices on larger quantities. Shall be glad to send samples.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

"DADANT'S FOUNDATION"

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER'S FOUNDATION

and WORKING your WAX for you.

Write us for ESTIMATE on full LINE of SUPPLIES. It will pay you and costs nothing.

RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

Standard Goods

Of the A. I. Root Co. I have them. Hives, Supers, Sections, Foundation, Smokers. Shipping cases: also A. B. C. in Bee Culture. Kept in stock ready to ship. Beeswax wanted. Catalog free

D. COOLEY, Kendall, Mich.

ITALIAN BEES and Queens and Supplies Root's standard goods. Ask for circular. Also Apiary, El Toro, Calif. 2-10-11

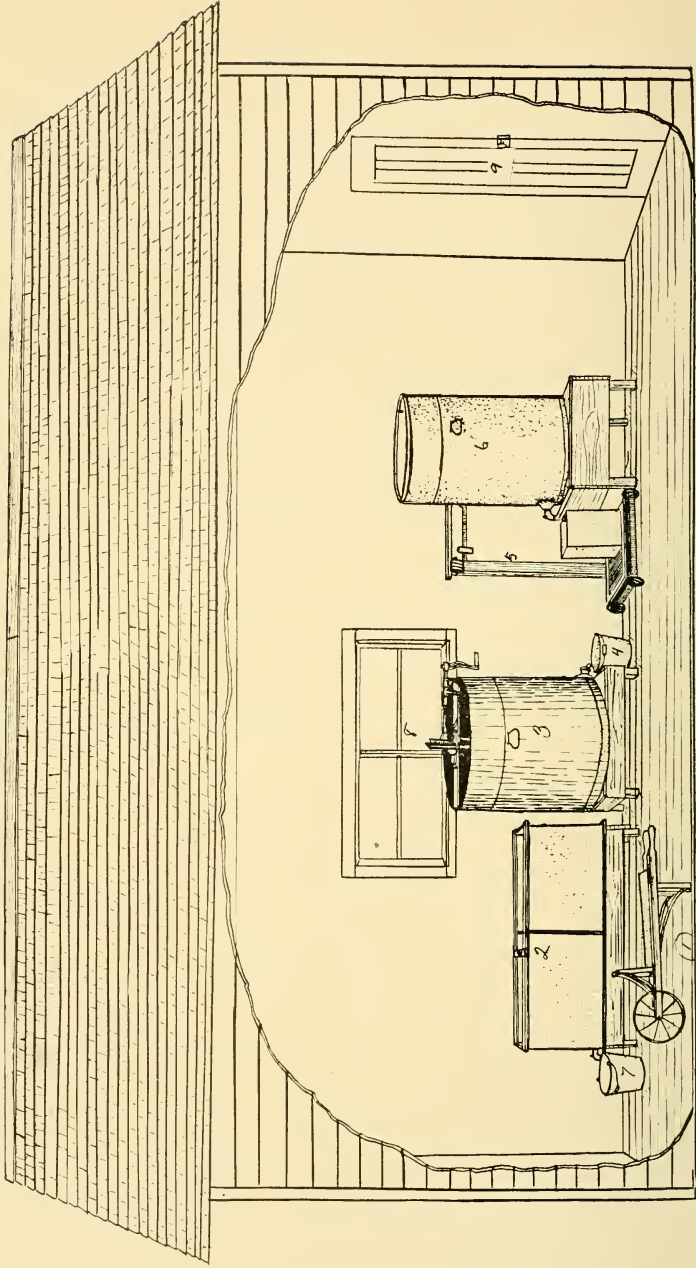
Italian Queens

And Nuclei. Tested queens \$1.00 each; untested, 75 cts. each. Nu lei, 50 cts. per frame, with price of queen added. Ready to ship March 1st

C. B. BANKSTON, Rockdale, Texas

2-10-11

For Sale 50 plain section holders for 1½ x 4¼ plain sections. Would exchange them for 1½ bee-way section holders. Also have a few bees for sale. 4-10-11 **CLYDE CADY, Grass Lake, Mich.**



Interior of Townsend Honey House, Showing Arrangement of Implements.

- 1, Wheel-barrow; 2, Uncapping Tank; 3, Honey Extractor; 4, Honey Pail; 5, Scales; 6, Separating Tank; 7, Honey Pail; 8, Window; 9, Door.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, JUNE 1, 1910.

NO. 6

Extracting Without Using Bee Escapes or Cloth Honey-Strainers.

E. D. TOWNSEND.



LET some of my readers might conceive the impression that they were out-classed, on account of our having had so much experience along the line of extracted honey production, and

that the results described in this article could be secured only by those with a large experience, I will explain that the student, Mr. E. J. Smith, of Blanchard, Michigan, had probably not taken off so much honey before in his whole bee-keeping experience, as he did in those four days of extracting; and, besides removing the honey from the hives (9,500 pounds), he worked one-half the time in the honey house.

My second son Arthur, twenty years old, who was brought up among the bees, did all of the uncapping of the honey. It will be seen from the above that two men with some experience in the production of extracted honey, and having the

appliances that I have described to work with, ought to accomplish as much, or very nearly as much, as they did.

RIDDING THE COMBS OF BEES WITHOUT REMOVING THEM FROM THE HIVES.

We will follow Mr. Smith out in the yard and see how he managed to accomplish this result. The tools he takes with him are a Daisy wheel-barrow, a well-lighted, 4-inch Bingham smoker, a hive-tool for prying the supers loose, a Coggsall bee-brush and a robber cloth. The latter article was used but little, as this system of management does not incite robbing. Queen excluders were used on this yard, so there was no brood to contend with in the upper stories to be extracted. Where queen excluders are used, the filled story is lifted up and the empty set of combs placed next the excluder; that is, whenever room is to be given.

With this system of working, the partly filled story, if any, and there usually is, is at the bottom, next to the excluder. The colonies to be extracted had on from one to two stories of surplus; the whole

crop of clover honey for the season, as I have explained in a former letter. The management is about as follows:

The wheel-barrow is placed in a convenient position near the hive, the cover of the hive removed, and the bees given a smoking that sends them down out of the top story of sealed honey. That is, the bees are smoked off the honey in the top story; then, as fast as nearly free of bees, the upper stories are lifted off and placed upon the wheel-barrow. There is no trouble in smoking bees from a story of all sealed honey, but where the trouble comes is in trying to get them off combs of unsealed honey. This is how he accomplished it:

The bees are smoked as usual, and many of them go down through the excluder, but quite a goodly number will stop for a load of honey when they come to the unsealed portion at the bottom, and, as we do not have time to wait for them to fill themselves, as time is too valuable at harvesting-time, the combs of honey are crowded over to one side, leaving a wide space next the side of the hive. Now, with a Coggs-hall brush we sweep the bees off from the side of the hive-body, and the side of the comb of honey next the hive. Then the comb is slid over next the hive-side, leaving a wide opening between the first and second comb to be freed of bees. We then sweep the bees off from both of these combs on the side next the wide opening, and so on; clear across the super. A little smoke is blown over the combs as we proceed, being careful not to drive smoke clear down through the excluder, thus causing the bees below to stampede, and perhaps try to get back into the story we are freeing of bees.

The bees, once off the combs of honey, scamper down through the excluder, so there are only a few left on the combs when wheeled to the honey house. The number of bees carried into the honey house with this management, in harvesting the crop mentioned, amounted to about the quantity of two natural swarms.

THE SECRET OF PREVENTING ROBBERING AT EXTRACTING-TIME.

The secret of preventing robbing when removing honey from the hives, and during extracting of the same, is to prevent a single bee from going home with a load of stolen honey. With no combs lifted from the hives in the yard-work, as explained above, there is no possible chance for robbers to get started at this part of the proceedings; hence, if they are tempted to rob, it must be from some cause directly traceable to the extracting house.

DON'T LET ANY BEES ESCAPE FROM THE HONEY HOUSE.

For several years we have been in the habit of stopping up our honey house bee escapes during extracting time, then opening them after getting through, thus allowing the bees that were carried in to escape. This worked well as far as the extracting-time was concerned, but if there was a particle of a chance for robbers to get into the honey house, this practice seemed to encourage it. It was noticed that while no robbers would seem to get into the extracting house during the extracting, soon after the escapes were opened, and bees had gone home loaded with honey, a terrible "to-do" would soon be on; and if there was a particle of a chance, robbers would find their way into the house. Sometimes the loss of mature bees by entering the honey house for "stolen sweets," after extracting was over, would be more than all we had carried in on the combs. Knowing this, no bees are allowed to escape from the honey house of their own volition, but, each night, or, better still, when through extracting at a yard, and the bees are clustered near each window, as at swarming time, the cluster is given a little smoke, then, with the Coggs-hall brush, the cluster is loosened and allowed to drop into a tin pail, or other receptacle, in which they are carried out into the yard and emptied near some colony weak in bees. Handled

this way, the bees go home loaded with honey, but know nothing about *where* they got it. This is so late in the day that robbers will not work, and, by morning, things have quieted down to such an extent that extracting may go on without any interfering from robbers. While the plan of carrying out the bees each night will work very well, usually, I recommend the leaving of the bees in the extracting house until through extracting when possible.

But to return to the out door work: About two, well-filled stories make a wheel-barrow load, but, as we like to finish up a colony at the first opening of the hive, if it has three stories on they are usually all taken at a load. Caution: Wash all drips of honey from the wheel-barrow and brushes between each load, so that no robber will get a taste of honey, or you may have trouble.

The honey house work was divided between the workers as follows: Arthur did all the uncapping, Mr. Smith all of the outside work. As it took Mr. Smith only half of the time to do the bringing in of the honey, the other half was occupied in turning the extractor, emptying the extractor, or weighing up honey, as the case required. As it did not take Arthur all of his time to do the uncapping, he, too, did the other work, as the case required.

If you will turn to the frontispiece of this number, the arrangement of the honey house will be seen, and explained. The wheel-barrow stands about where it is stopped when the load of honey to be extracted is wheeled in. Some empty stories of combs are allowed to stand at the left of the one who does the uncapping, to set the full stories to be uncapped upon, to make them the right height for convenience in handling. As the combs are uncapped, they are hung in the end of the uncapping box next to the extractor, and remain there until extracted. Any drip from them goes into the uncapping tank. The cappings are kept well chopped up, so that the

honey will drain out in good shape. The gate of the uncapping tank is worked *open* all the time, except when emptying the pail; and this is the only gate in the extracting house that requires watching.

The extractor is allowed to fill with honey until the reel begins to wade in the honey, when a 16-quart pailful is drawn off, and the gate closed until it is to be filled again.

The *modus operandi* of working the separating tank is as follows: With the separating float (previously described) in place, the tank is filled full of honey as it comes from the extractor. When pouring in the first two or three pails of honey from the extractor some particles of comb and impurities will go into the gate, so draw out half a pail or so, or until the honey appears clear, before beginning to can.

It will be noticed, if you again turn to the frontispiece, that the uncapping tank and extractor are elevated so that a pail will set under the honey gate, also that the separating tank is of the right height so that a 60-pound can sitting on the scales will go under the gate.

Only one or two cans of honey are drawn at a time, when the tank is again filled full. Handled in this way, with a 32-inch-deep tank and our separating float, honey is *more* free from particles of comb and impurities, than when strained through cheese cloth in the usual way.

The separating feature seems to work automatically, for the faster it is worked the warmer is the honey, (animal heat) and the more rapid the separating of the impurities; consequently, the capacity is unlimited; or at any rate, it will handle all the honey that can be extracted with a 4-frame extractor, and do the work well.

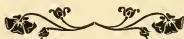
Each night when through extracting, when the separating tank is still full of honey, remove the separating float, and skim the honey in the tank, and can it up, or that portion that is clear. Stop drawing when the scum begins to run

through the gate, and what is left at the bottom of the tank goes with the next day's extracting.

The tank *must* be empty of cold honey when commencing the day's extracting, or the system will be a failure.

As the filled 60-pound cans accumulate, they are carried out of doors, then, at night, when through extracting for the day, a dray load is cased up ready for market.

REMUS, Mich., May 2, 1910.



Handling Bees, Hives and Sections in the Fore Part of the Season.

S. D. HOUSE.



I have often been asked the question, "Which should the beginner in apiculture produce, extracted or comb honey?" My answer is, extracted honey; for the following reasons: First

a colony of bees will produce some extracted honey although not in a normal condition, while the same colony would not produce comb honey. Then, again, most beginners have not the experience nor judgment to produce, grade, care for and market comb honey, as it should be done, to their own interest or that of the fraternity at large.

IN PRODUCING COMB HONEY A CHANGE OF PLANS IS SOMETIMES NECESSARY.

A comb honey producer should be one with much experience; a specialist in his vocation; a student of Nature; and possessed of great tact, that he may be able to meet and grasp all conditions that may face him at any time during the honey flow. Possibly a sudden change in weather conditions might call for extreme changes in manipulations; an entire change in former plans, in order to obtain fair results. In fact, he should be resourceful, to enable him to make the most

of the opportunities offered him. A comb honey producer cannot follow any fixed method, without some changes, to meet the variations of the seasons, thereby drawing upon his experience to do the right thing at the right time. He should know his location well; making observations from time to time, that he may know the time and extent of different blooms that will give the much desired nectar, and which will guide him in giving super room.

CARNO-ITALIANS EXCELLENT COMB HONEY PRODUCERS.

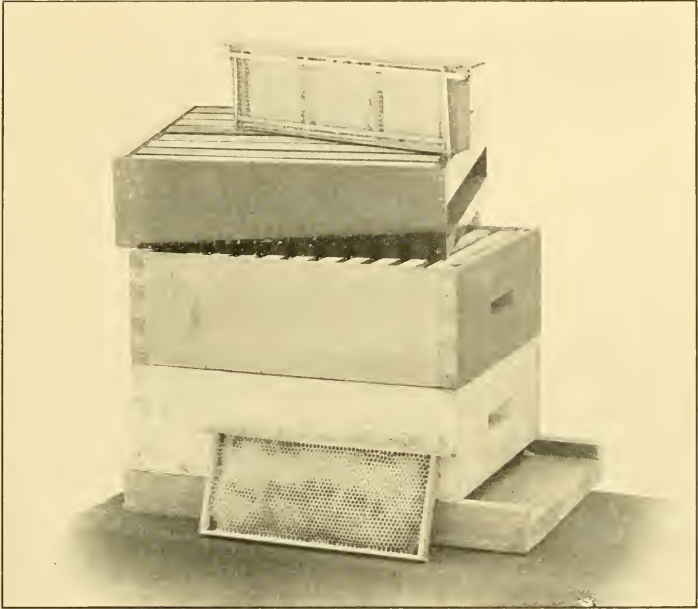
There is a considerable difference in the strains of bees in building comb and sealing the honey. The Carniolans excel as wax producers, and, in the prolificness of their queens; and when the queens are mated with Italian drones, the workers are not likely to swarm any more than the pure Italians. Bees from such matings make the very best comb honey producers, as they seal their honey with a heavy capping, somewhat oval, with an air space between it and the honey, giving to the surface of the comb that fine appearance so much desired.

HOW THE SWARMING PROBLEM IS SOLVED.

The greatest obstacle the comb honey producer has to overcome, is the swarming impulse. A colony of bees will not do good work while under this impulse. As our bees have had plenty of room during the breeding season, and up to

the time that our flow opens, they have not prepared to swarm, and as soon as there is honey coming in fast enough so that they can build comb, we are ready to give them the supers. First, we remove all but one section of the brood nest, placing upon this shallow hive one

young queens have hatched in the sections of brood that were first removed, we exchange sections with the swarming colony while the bees are in the air. The old queen being clipped is caught and placed in a cage, and the section of brood with the young queen is placed on



Sectional Hive and Super Used by Mr. S. D. House.

or two supers, according to the size of the colony, then we shake the greater part of the bees from the sections removed, to the one which has the supers, and place the section of brood removed on a new stand, and give a ripe queen cell. If the colony that we have started to work for comb honey should swarm out later, we either remove the balance of the brood and give full sheets of foundation with one empty comb, or, after we get well into the season and our

the stand where the swarm issued, and supers placed thereon. The brood with the young queen should be all sealed. With this young queen and no unsealed larvae in the hive, we have controlled swarming in this colony for the season. The old queen is killed; or if valuable, may be returned to the brood that was taken away.

If we wish to make increase, we set a section of brood upon a new stand and give a queen cell; and, after getting the

desired number of increase on their stands, we give another section of brood to each new colony. When taking this second section of brood from the parent colony, all of the bees can be brushed off, as there will be young bees hatched sufficiently to care for the brood in the second section given to the colony on the new stand. After each new colony has two sections, place an excluding zinc on and tier the brood above. As the brood hatches from the upper sections, the combs are filled with honey, which can be extracted after the flow is over; then these combs are given back to those colonies that produce comb honey over a single section that they may prepare the brood nest for winter.

THE SECRET OF SECURING WHITE CAPPINGS.

After a colony gets well started in its first super, give an additional one placed next to the brood nest; and, if two supers were given at the start, interchange them, placing the top one at the bottom, and in ten or twelve days later another super may be given. If the flow is normal they will take a super about every seventh day, but when the fourth super is given, the upper one is taken off with its finished sections of honey and taken to the store room. Herein lies the secret of preserving that beautiful white capping: Raising the supers about the time the bees commence sealing the honey and thus the last finishing touches are given, *away from the brood nest*, where there is less traveling done by the bees, then taking it away from them as soon as finished, using an escape board to get bees out of the supers.

SUPERS AND WIRE CLOTH SEPARATORS.

A great deal depends upon our fixtures in producing a fancy article, including the neatness of sections. The super I use was invented by the late N. N. Betsinger of Marcellus, N. Y., with a wire cloth separator and hanging broad frame. This super is so constructed that it gives the least possible bearings with its broad frame, separator, and spacer,

there is only the thickness of an edge of tin that has a bearing. The separator is so spaced that it gives a bee-way longitudinally, past the sections. There is also a bee-way at the ends of the brood frames and super; the wire cloth separator provides free communication between the sections, and a free distribution of heat throughout the super. I have separators that have been used many years and are free from travel stain and propolis. The super is covered with a honey board; and let me say right here that a *soiled* cloth cover should not be used over a comb honey super, if one expects to produce a fine article, as the bees transmit the color and soil to the comb.

NO "BAIT COMBS" NOR OLD FOUNDATION ARE USED.

With the sectional hive we have no necessity to use "bait combs;" in fact, we cannot use them, for the bees *would deposit pollen therein* if hived on foundation. Furthermore, they *never* should be used; the combs being exposed to the air from the season before, harden and become tough, and the consumer who gets such honey is dissatisfied; and many think they have some "manufactured" article instead of honey. I have had it "explained" to me many times at our State Fair honey exhibit how they had been "fooled" by grocerymen selling them a manufactured comb honey, saying "they knew" for they could tell the difference between the comb that the bees made and that which we made. If we are to maintain and increase the consumption of comb honey we must be very careful in what we do, as one dissatisfied customer may do us much injury. We use full sheets of extra thin foundation in supers and never use foundation that has been carried over from the season before; even though it is packed in its shipping box it will harden some, no matter how well protected from the air, and the bees will not start to work it as readily as the newly made. We practice putting foundation into the

supers the same day they are to go on the hives, and, if the bees do not work foundation within forty-eight hours, we stop putting on supers until such time that they can work it. I would rather the bees would do their loafing in the hives than in the supers, gnawing and cutting

the foundation until it looks like a bell in some distant tower, using the cuttings to fasten up crevices.

In the next issue I will give some of my experiences in the care and grading of comb honey.

CAMILLUS, N. Y., May 14, 1910.



Producing a Crop of Comb Honey with Four Visits During the Harvest, and no Swarming.

MRS. S. WILBUR FREY.



WHEN I read a book or an article, I always like to know something of its author, so I will mention a few things of myself, especially as they refer to my bee keeping life. Twenty-

five years ago, at the time of my marriage, my husband had 15 or 20 colonies of black bees in box hives. He hated to be bothered with them, and hated the stings still more. There was plenty of work on the farm, so the care of the bees fell upon me. The bees increased until I found it necessary to hire a girl to help with the housework, and stay with the children, while I worked in the bee yard. The bees continued to multiply, until, some years, we had so many that we killed the increase in the fall. We finally concluded that this did not pay; so we began the establishing of out-apiaries. These apiaries were located near the low lands of the Rice Lake region, where there are plenty of swamps and streams, yet near a good farming country with its orchards. Others, seeing our success, started in the business,

until, at one time, we could count 900 colonies within five miles of our present apiaries. It was like a berry patch where there are more pickers than berries. This condition lasted a few years, then came hard winters and late springs that few apiaries were prepared to endure, and piles of old hives now mark the locations of most of these apiaries. Of course, we had our share of reverses (it is not a very dependable warrior who has never been in battle); but I can truthfully say that our heaviest losses and hardships have been the real stepping stones to our greatest successes. At present we have three apiaries. As already mentioned, we keep a hired girl or woman six or eight months out of the year, but a large share of my time is claimed by my home and family; as there are many things that only a mother can do. With this as an introduction, I will now take up the actual work of the season, as it begins in the spring.

IMPORTANT TO HAVE AN ARMY OF WORKERS
WHEN THE HARVEST IS ON.

I have found that, in order to secure a good crop of honey, the bee keeper must thoroughly understand his location—must know the honey producing plants and their periods of bloom. He must hold his colonies together (not allow swarming) and have his hives filled to overflow—

ing with bees when the harvest is on. I use every means possible to have eggs laid that will produce workers for the harvest. Eggs laid June 1st will produce workers that are ready for labor July 1st; but it is very apparent that eggs laid after June 1st will not produce workers in time for the early, white, honey harvest.

MANIPULATIONS THAT PREVENT OR DELAY SWARMING.

We will suppose that it is June 1st, and the bees are beginning to work on raspberries or clover. Each colony has from six to twelve combs of brood, and the young bees are hatching rapidly. Within a week or ten days, the swarming impulse will begin to make itself manifest, unless something is done to thwart it. We all know that natural swarming means continual vigilance, with the loss of an occasional swarm; besides, swarming usually takes place just as a nice start has been made in the sections. Swarming may now be discouraged by equalizing the brood. That is, by taking from a strong colony three combs of its youngest sealed brood, giving it to weaker colonies, and filling its place with empty combs. The removal of this brood, and the giving of empty combs in which the queen can lay, often turns the scales in favor of not swarming. Another plan is that of putting on an upper story of combs, and raising up into this upper story a few combs of brood, filling their places with empty combs. This gives an abundance of room, both for brood and honey, and usually checks all attempts at early swarming.

Right here may be a proper place to say that I use throughout the season, a code of signs and abbreviations for marking on each hive the condition of the colony. I can walk through the yard and tell, at a glance, by these signs, the condition of each colony at the last examination. For writing on the hives I like the red and blue lumber pencils. They are soft, and write easily, and the

marks will show all of one season, but will be faded and gone, out of the way, before the beginning of the next season's work.

THE FIRST VISIT TO PUT ON SUPERS.

I can tell by the flying of the bees at the home yard that the harvest is on, and that it is time to put on supers. Reference to my records show that the Cavendar is the strongest in bees and brood, and will be the first to need supers. If there are 75 colonies, it is likely that 60 of them will need supers. We will load up the supers, and take care not to forget our dinner, jumbo smoker, and leather satchel that always contains the pencils, veils and hive tools. Upon arriving at the yard, I will put supers on the medium, single-story colonies first. If I find plenty of bees and brood in a colony, I call it ready for a super. If I have doubts, I remove one comb and set it away in a box where it can be covered up. If the bees eventually cluster thickly in the open space left by the removal of the comb, I give them a super. After dinner I begin the work of putting supers on colonies that have previously been given upper stories of comb. I remove an upper story, set it by the side of the hive, put on the super and cover it up; then go to the next, and so on, until all are done. When the supers are all on, I return to the upper upper story that was first set off, and begin the work of caring for the bees, combs and brood in the upper stories that have been set off. Sometimes nearly all of the working bees will have returned to the parent hive. According to circumstances, I either shake off the bees in front of their old hive, or else leave them on their combs, but, in either case, these combs of brood are used to build up the weakest colonies. A normal colony usually begins preparations at least 10 days in advance of swarming, and, if find no cell cups started, I know that there will be no swarming before the next visit.

THE SECOND VISIT, IN WHICH QUEENS
ARE REMOVED.

I keep close watch of what the bees are doing at home, and, in from eight to fifteen days, depending upon the weather and the honey flow, I make my second visit. The sections in the first supers will probably be well-drawn and partly filled with nectar. I put on the supers immediately upon my arrival at the yard, as the clustering of the bees in the new supers draws the bees up out of the brood nests, and makes the work of examination for swarm-preparations much easier. After the supers are all on, I begin, where I began putting on supers, and examine the brood nests for indications of preparations for swarming. If I find only cell cups, but no eggs in them, I close the hive and pass on. If I find any cups containing eggs, or hatched larvae, even if ever so small, I remove the queen. If she is an extra good one I save her in a nucleus; otherwise, I kill her. If I find the swarming impulse to be quite general, I remove the queens from two-thirds of the colonies; or more than that if there are that number preparing to swarm. If I find nearly the whole apiary preparing to swarm, as I have on several occasions, I save in nuclei as many of my best old queens as will be needed to furnish combs of larvae at my next visit. With a boy to help me I can uncover a hive, remove the supers, find the queen, replace the supers, and cover the hive, at the rate of one hive every seven minutes. I seldom fail of finding the queen the first time over the combs. Often, when there is not much work to be done, I can go over the yard in three hours, putting on, or changing supers, looking for queens, or the conditions of each colony. It matters not how far advanced an apiary is in its preparations for swarming, I can so treat every colony that there will be no more swarming for at least eight days more.

In eight days, or, in nine days, at the utmost, from the time that I removed the

queens, I must return and destroy all queen cells; as it is possible to have a young queen hatched out on the 10th day after the removal of the old queen. It will not answer to destroy the cells before the eighth day, as there may yet be an unsealed larva over which the bees will construct a queen cell. The queen from such an old larva would be worthless, but it can lead the bees to the woods just as well as a good queen. At this visit I first examine some of the colonies that have not made any previous attempts at swarming, and still retain queens. When I find such a colony that is still without queen cells, I remove two combs of young larvae, replacing them with empty combs, starters, or sheets of foundation. I work on this class of colonies until I have a hive full of combs of young larvae, when I commence on the queenless colonies, destroying every queen cell, and giving each colony a comb of young larvae, from the lot that I have just taken from the other hives. If by any possibility a young queen is found hatched, no larvae are given, as it would lead to swarming. When my stock of combs of larvae is exhausted, I return to the colonies that still have their queens, and continue the work of examination until my stock is again replenished. I thus continue to examine, alternately, the two classes of colonies until I am through the yard. As I go along with this work I also note and mark the colonies that need supers.

The giving of this comb of larvae satisfies the bees. They have babies to feed, and they will continue the work of honey gathering, as they know that it will be impossible to swarm within 12 or 15 days. Their queen cells are all gone, and they go to work energetically to build another lot; and, by the time that this lot of queens is ready to hatch, the swarming fever has been cured.

The next visit will be about the ninth day after destroying the first batch of queen cells, and giving the combs of young larvae. This will be about 18

days after the removal of the queens. Nearly all of the brood has hatched; the hives are overflowing with young bees; the working forces have been kept together; the brood nests are nearly full of white honey; and the bees' greatest desire now is for new mothers. This can now be gratified by simply destroying all the cells except one (the largest and finest) in each hive. I always place the comb of larvae in the same position in each hive, hence, lose no time in finding it. Two minutes per hive is time enough to use in destroying the cells, and it will not be necessary to again examine these colonies. As the young queens begin to lay, the bees will remove the honey from the brood nests into the sections. Another advantage of the plan is that we save the honey that would have been used in rearing a lot of bees that would have become simply consumers of still more honey during the hot part of the season when there is little to gather.

WHY IT IS NECESSARY TO BUILD TWO BATCHES OF CELLS.

I have been asked why it would not answer to allow one queen to hatch from the *first* batch of cells. The greatest objection is that the colonies have not yet been cured of the swarming impulse. Any cell that is overlooked will lead to swarming. If a virgin queen returns to the wrong hive, there is swarming. Once the swarming-note is heard in an apiary in which young queens are taking their flights, there is danger of a panic of swarming. By the time that the second lot of queens is ready to hatch, the swarming fever is over and past.

IMPROVING OR ITALIANIZING STOCK.

This method also offers an excellent opportunity to Italianize or improve our stock. At the fourth trip, simply destroy all cells and introduce Italian queens by some of the usual methods. Just a word of caution: It is not safe to introduce laying queens until the swarming fever has abated—unless you like the fun of

chasing swarms. If I have ordered queens, and they don't arrive by the time that it is necessary to destroy the cells, I keep the colonies in a normal condition by giving each a comb of larvae as often as once in nine days, until the queens arrive. When introducing the queens I remove all unsealed brood; otherwise, the bees might prefer to kill the queen, and rear one of their own. I consider thrifty, young queens of vast importance. If we have these, and our bees have been properly housed and provisioned, our colonies will be stocked with young bees to carry them over the trying months of March and April.

Four trips are all that I find it necessary to make during the honey harvest. On the first trip I equalize the brood and put the bees in condition to stay at home and enter the supers; and put supers on all that are in condition to receive them. On the second trip I remove queens where there is danger of swarming; and give supers where needed. On the third trip I give supers where needed, and destroy queen cells; giving each queenless colony a comb of young larvae. On the fourth trip I simply destroy all cells except one in each colony. Four days' work, and the crop is secured!

THE PROFITS OF THIS SYSTEM.

The largest crop of honey that I ever secured was 150 pounds, per colony, spring count. The smallest was 40 pounds per colony. If we have a good location, and should secure 50 pounds of honey per colony, even in a poor year, then 100 colonies would furnish 5,000 pounds of honey. Three-fourths of this ought to sell at the highest market price. It ought to bring at least 13 cts. per pound, right through, for all of the grades. This would be \$650. From this must be deducted the cost of sections, foundation and shipping cases, about \$80, leaving \$570 for the labor. My net profits, for the past three years, have not been far from \$1,000 per year.

SAND LAKE, Mich., March 10, 1910.

Freeing Extracting Supers of Bees Without Bee Escapes or Removing Combs.

F. B. CAVANAGH



I note with interest that Bro. Townsend is soon to give us a method of freeing supers of bees without removing the combs. We have not seen each other lately, and I am

wondering if there is any similarity between his plan and that of my own. The method that I use is practically the same as the one that I formerly used for clearing from a super the few bees that sometimes remain after a bee escape is used. I described it in the Review two years ago. I often thought of using it on a super full of bees, but, time and again dismissed it as wholly impractical. However, actual use compelled me to change my opinion; and one season's use shows it to be a complete success.

I use eight or nine combs in a 10-frame super, and this wide spacing allows a little more space between the bottoms of the combs. In removing the honey I stand at the side of the hive, and hold the smoker between my body and the side of the hive, thus leaving both hands free to manipulate the combs and brush. With the screw driver or hive-tool I first break the super loose, and remove the queen excluder, if there is one directly under the super to be removed. I then loosen the combs and space them over towards the opposite side of the hive, thus leaving a space next the side of the hive nearest me, in which I can insert a Coggs hall bee brush of the long, soft, pliable kind. While doing the spacing a moderate amount of smoke is used in order to drive as many

as possible of the bees down out of the super. After the combs have all been loosened and pressed over towards the opposite side of the hive, I still keep puffing the smoker by an occasional pressure of the body, and proceed to brush the bees down out of the space between the first comb and the side of the hive. When this space is freed from bees, the first comb is pressed back, with the left hand, against the side of the hive. The space between this comb and the next one is cleared in a similar manner, and the comb pressed back in contact with the first comb. This process is continued until all of the spaces have been freed of bees.

Now, there are a few essential things to remember in making the highest success with this method. First, a good, pliable brush, with the strands well-thinned. I have seen brushes sold as Coggs hall brushes that were stiff as a board, and about as useless for brushing bees. Next, we must so handle the brush and the smoker that the smoke goes with the brush. Above all, don't go to sleep on the job, or the bees will return to the combs first cleaned before the last ones are freed from bees. Another thing: It is very necessary to keep the bees running *forwards* along the ends of the hive, so that when the combs are free from bees there won't be a lot of them sticking to the inside of the super to go back on the combs as soon as the super is removed. If they are inclined to stick to the ends of the hive, a puff of smoke aimed diagonally downwards and forwards will start them to moving. Don't use too much smoke, or it will cause the bees to stick their heads into the honey.

It is not necessary to use the body entirely in manipulating the smoker. Sometimes it is more convenient to use

the smoker with one hand, and space the combs with the hand that holds the brush. The brush should be used with short, vibratory strokes that sweep the bees down in as gentle a manner as possible; at the same time keeping the *ends* of the super brushed or smoked free from bees. Turn or twist the brush just enough so that it will fill the space, thereby cleaning the sides of the two adjacent combs at the same time. Also endeavor to brush the bees towards the center of the hive, rather than towards the ends.

This is the quickest method of freeing a super of bees that I have ever tried. Notice that *two* comb surfaces are brushed at the same time; also that no time is wasted in removing the combs from the super and returning them. There is no extra super that must be kept covered up to keep out robbers. In fact, robbers stand no show whatever. One can work all day during a dearth of honey, and not one robber can steal a load. With bee escapes, bees sometimes give trouble by getting in through cracks, but no such accident can happen with this method. Another most important

advantage is that the honey comes off the hive warm, and may be extracted immediately. Still further, the bees are not irritated and enraged as they are when brushed into the air.

In conclusion I will say that while I have used this plan only one season, I have tested it in every possible phase; not only in clearing supers of honey, all through the season, but in brushing bees from combs of brood in all stages into an empty hive. The bees simply *must* get off the combs; and they don't waste any time when there is a brush following them up that distributes a decidedly smoky atmosphere. Those who have occasion to treat foul brood by shaking, will find this plan invaluable. No bees are shaken outside the hive; and, by hurrying matters along they *can* be driven off the combs before they have time to fill up on honey. In this case it will be necessary, of course, to feed; and this will go a long ways towards satisfying them with their new home. This plan also works well in uniting bees.

HEBRON, Ind., April 7, 1910.



Getting Rid of Foul Brood With no Shaking Of Combs nor Loss of Honey.

IRA D. BARTLETT.



SEVERAL years ago, before I had heard of the Baldridge plan, I freed 100 colonies of foul brood by a process that, in some respects, resembles the Baldridge meth-

od. There is no shaking nor exposure of combs, and a good crop of extracted

honey may be secured with no danger from swarming. Here is the plan that I followed.

I took as many hive bodies as I had colonies in the yard, as I treated every colony regardless of whether it was diseased or not, and placed nine frames of foundation, and one drawn comb, in each of these hive bodies, the combs being placed in the center, and set one of these hive bodies, thus prepared, under each colony in the apiary, putting a queen excluding honey board between the new hive body and the brood nest

above. I then went through the colonies, found the queens, and placed them below the queen excluders. This was done just as soon as the clover and raspberries were in bloom, and honey coming in freely.

From time to time, as more room was needed, it was given by additional supers, always placing the newly added super next to the honey board. At the end of 21 days, I slipped a bee escape and board beneath each old brood nest, which it will be remembered, was at the top. When the bees were all out of these old brood nests, they were taken off, stacked up in the honey house, the honey extracted, the combs made into wax, and frames burned. At the end of the season I took off the other honey, and kept it separate from that taken from the brood nests, as this honey would not be contaminated. In the end I melted up every comb that had ever contained brood.

In order to make a success of this plan, the honey flow must last a little more than 21 days, and the colony worked for extracted honey.

I have practiced this plan with colonies that I wished to transfer from undesirable hives. In 1908, in a yard of 90 colonies, I treated about one-fourth of them on this plan, and they gave me a third more honey, and not a swarm issued, although some had capped queen cells when the treatment was given.

EAST JORDAN, Mich., March 17, 1910.

[I expect that some will be a little skeptical about the curing of foul brood, or getting rid of the nuisance, by establishing a new brood nest in the *same hive* where the old brood nest is allowed to remain until the old brood has all hatched. But let us consider the conditions. The new brood nest is in another part of the hive, and the work is done at a time when new honey is coming in *freely*. No old honey is being used; in fact everything is *covered up* with *new* honey. Under the circumstances, it looks very reasonable to me that the plan should work out exactly as described. Gradually, we are learning how to rid an apiary of the disease with little labor, and not much financial loss.—EDITOR.]



EDITORIAL

Have the Nerve to attempt big things.

Look out for yourself, or you won't see very much.

Removing the queen for the prevention of swarming is nothing new, but, in connection with this plan, Mrs. Frey has worked out a system that is unusually fine.

Brace Combs left on the bottoms of wide frames or section holders lessen the need for bait combs in the sections—so writes Mr. M. D. Fisher, of East Bloomfield, N. Y.

The Steam heated uncapping knife is something that Mr. M. R. Kuehne of California has used with great satisfaction, and he wonders why it is not advertised, and more said about it than there is.

Straining Honey by attaching to the gate of the extractor a bag of cheese cloth six inches long is recommended by Mr. Lyon in "How to Keep Bees for Profit." With a small extractor, or thin honey, this might answer the purpose, but would be sadly deficient with thick honey or large extractor.

I Don't believe in using one-half of a journal to tell how good is the other half, but, once in a while, some subscriber says something that I can't resist repeating it. Recently, one man wrote that it made him "feel good all over" when the Review came, as he would now have something good to read.

Mr. Lyon tells us, in his new book, to let a newly hived swarm stand where it is hived until evening, then place it upon its permanent stand. Better carry the colony to its permanent stand just as soon as the bees are in the hive, otherwise the workers that leave the hive during the day will mark the location to which they will return the next day, and find the hive gone.

Scraping the honey knife across the rack to clean it of cappings is not necessary when uncapping honey. I have frequently watched bee keepers when uncapping honey, and some of them will stop and scrape the knife clean between each stroke. This is simply so much time wasted, as each succeeding stroke will force from the knife its load of cappings. By the way, the cappings never adhere in this manner to a steam heated knife.

Migratory Bee Keeping has always had a charm for some of us uneasy mortals. It might not be migratory bee keeping exactly, but Mr. H. C. Ahlers has been in Loiusana the past spring, and gathered up 300 colonies of bees. On April 18th he wrote me that he had taken over 6,000 pounds of honey, and on the 22nd of the same month expected to ship the bees to Wisconsin. They were to go in an iced, ventilated refrigerator car. Bees to be well-watered when they start, but no watering on the route. They are to be shut in Thursday night, loaded Friday, and, barring accidents, unloaded in West Bend the next Tuesday.

The Townsend separating tank is in reality a gravity strainer; that is, it depends for its effectiveness upon the fact that particles of wax are lighter than honey. A tank of honey allowed to stand, will clear itself of wax by the particles rising to the surface, but if we pour a pail of unstrained honey into a tank of honey the force of the falling honey will carry down the particles of wax. By the use of a float this force of the honey is broken, and it slowly finds its way below the float *via* the crack around the edge. By keeping the can nearly full of honey, the particles of wax never reach the bottom, from whence honey free from wax may be drawn off as often as the can is nearly full. The simplicity of the plan is only equaled by its effectiveness.

Shall Burr Combs be Scraped from Top Bars?

In a late issue of Gleanings there is illustrated a rack for holding frames while the burr combs are scraped from the top bars. Accompanying the cut is a short article from which I copy the closing paragraph, which reads as follows:

With it we scraped all of the frames from 20 colonies last spring, and intend to do the same this spring. We do not know how many bee keepers make a practice of "spring cleaning" of frames; but we do know that too much of it can not be done, and that it can be much more easily done with some such device.

In all sincerity, I would like to ask why scrape burr combs off top bars? It is something that I have never done; and if there is anything to be gained by it I would like to know it.

Bees Work where they can do best. Mr. Lyon, in his new book, says that they seem willing to extract nectar from any available source, but there are times when they will notice scarcely any other flower if they have access to basswood. I doubt if basswood is any exception in this respect. If buckwheat is yielding copiously, I think they will desert other blossoms that are yielding less, and work

exclusively upon the buckwheat. The same is true of clover, or any source, for that matter. I have seen them desert the clover for the basswood, and then when the period of basswood bloom had passed, come back to clover. If two sources of supply are open at the same time, they will choose the one that yields the most abundantly.

“Keeping More Bees.”

As illustrating the change of views upon this subject, I will mention what took place at two conventions. At the Syracuse, N. Y. convention that I attended recently, more than one member expressed satisfaction at the profit that had come from branching out and making an extensive business of bee-keeping. How quickly my mind ran back to the time when I first began preaching the gospel of “more bees.” At a convention I put into the question box the following query: “Why don’t you keep more bees?” It’s reading was followed by a titter. The president was a broad-minded man, and tried to get the members to discuss the question; told them that it was really the most important matter that had been brought up; but it was no go. Such a question could be viewed only in the light of a joke.

Producing and Selling are far Different Problems.

Bro. Root of Gleanings quotes from my editorial on selling honey, and says, in part, “After all that is said and done, honey producing is a business in itself. The art of selling at good prices is entirely another business. It is seldom that we find any one man sufficiently educated in the art of producing and selling both; and it therefore follows that the great majority of bee keepers will have to depend upon some one else to do their selling.”

Of course, producing and selling are far different operations, but every producer must dispose of his product in *some manner*, and for each particular

producer there is some particular way that is best for *him*, and the Review is trying to help him find that way. You may have found the way that is best for you, but it is just possible that you have not.

Uncapping Drone Brood to Prevent Swarming.

Mr. M. R. Kuehne of California writes me that they have two honey flows in his locality, with an interval of two or three weeks between them, hence the Jones method of uncapping a large share of the brood would leave the colony in poor condition for the second flow. He adds, however, that uncapping the drone brood, if in sufficient quantity, will produce the same effect as uncapping the worker brood. He says that he wrote of this plan several years ago, but the editor to whom he sent the account replied that this might prevent swarming to some extent, but asked “why raise the drone brood in the first place?” Mr. Kuehne replies, that it may be uncapped, and thus prevent swarming. He says that when bees are not allowed to rear any drones they plainly show their dissatisfaction. He allows them to rear some drone brood, and then uncaps it. He says that he has practiced this several years.

Better Wait Until the Honey is Sealed.

I am aware that honey may be ripe without it’s being capped over, but, as a rule, uncapped honey is not fully ripe. An expert may be able to say whether honey is ripe, even if unsealed, but the rank and file better wait until the bees have placed upon it their seal of approval. I recently received a letter from a bee keeper who put up a most vigorous protest against advising the extracting of honey before it was sealed. He said that, for ten years, he had been using plenty of hives and combs, and allowing the bees plenty of time in which to cure and cap their product. He feels positive

that he secured nearly as much honey as by any other method, and he *knows* that such honey has held his trade all of those years. Last year he was unfortunate enough to hire a man of large experience as a bee keeper, but given to extracting too soon, and, in spite of all his watchfulness, he got several thousands of pounds of honey that had to be sent to the bakeries.

"How to Keep Bees for Profit."

This is the title of a new book by D. Everett Lyon. It contains 330 pages, is delightfully written and beautifully illustrated. The publishers are Mac-Millan Co., 66 Fifth Ave., New York—price \$1.50.

The author's experience peculiarly fits him for the writing of such a work. He has had actual work in the apiary, while his education and experience in writing and speaking fit him to put his apicultural knowledge into a delightful style. By this I don't mean that the language is lofty in "style," quite the contrary; it is that plain and common place speech that we so easily understand, and enjoy because we do understand.

Of all the numerous bee books, I think this is the best one for the beginner that I have ever read. In fact the general public would find the book readable and enjoyable. It assumes that the reader knows nothing of bee keeping, and then proceeds to tell in the most straight forward manner, just those things that the beginner ought to know.

The Jones Method of Swarm-Control an Expensive Method.

I have received another letter from the South touching on the Jones system of preventing swarming. It was written by Wald. C. Conrads, of New Braunfels, Texas. He says:

In regard to Dr. Jones' method, I beg to state that it is rather expensive to raise so much brood and then destroy it in such a way. It is very likely, if we would use the greater part of the surplus

brood in the hive for increase, or building up weak colonies, and then uncap only about one L. frame of brood, this uncapping being scattered all over the remaining frames in the hives, just a little on every frame, would prove quite as effective. Then, an uncapping knife is not a handy thing for such work. A device like a four-inch print-roller, provided with sharp points which would tear up the cappings of the sealed brood, would do the work easier and quicker, also, at the same time, it would not make it such an unpleasant task. I suppose, at least, that the bees would carry out all of the sealed brood of which the cappings were punctured.

As a rule, the Jones method is a very expensive way to control swarming; but whenever a bee keeper got behind with his work in a bad swarming season it would undoubtedly prove more economical to destroy the brood than to lose all the prime swarms, to say nothing of the after swarms.

Our Beloved General Manager of the National Association, and his good wife, met with a very serious accident on the evening of March 31st. They were driving to the post office to mail the last lot of "Legal Rights," when, as they were descending the first hill, they heard the rattle of a rig behind them, as though a "run-away" was coming. Mr. France hit his horse with a whip and tried to get out of the track in time, but a drunken neighbor drove his horse into the back of their rig, and they were thrown out on the stones. Mr. France was dragged some distance, holding on to the lines. He sustained a slight fracture of the skull, his arm and hip were skinned, and the muscles of his back torn loose. He was obliged to lie on pillows for 21 days, and even now, in getting into bed, he has "to walk in on his knees," get a pillow behind him and then "drop" back, as he can't use his back yet, and will never be strong there again. May 15th he had to undergo an operation, and it will not be the final one, either. Mrs. France landed on the stones under the kicking broncho, and had her eye glasses smashed into her cheek, making a wound that will leave a permanent scar, and receiving

such other injuries as to confine her to her bed for nine days. It is a wonder that our good friends escaped with their lives; and all because it was the night before city election on the liquor question, and, whiskey being free at the bars, this neighbor was so crazy after "more," that he didn't use his eyes in driving.



Keep the Stray Bees in the Honey House.

With almost any system of management a few bees will be carried into the honey house when extracting honey, and, with some methods, a *good many* will be carried in, and the most of us try to get these bees out again just as soon as we can; in fact, our honey houses are rigged up with bee escapes at the windows to allow the bees to pass out as fast as brought in. If the extracting is done during a honey flow, this practice is not objectionable, but during a dearth of honey, the turning loose of these bees loaded with honey raises the very Dickens, as Mr. Townsend explains in his article this month. As he well-says, so long as no bee carries home a load of honey all is quiet, but the coming home of a loaded bee at a time when bees will rob, no matter whether that load was stolen, or whether it was acquired during the excitement of carrying a super to the honey house, will start out hundreds of robbers in hot haste. Keep these loaded bees in the honey house, let them cluster and cling to the window casing until the work is done at that yard then give them to weak colonies. These bees are loaded with honey and could hang there for days without starving. Some of them may return to their original home, but no great harm will be done, as the work of opening hives is over.



"Keeping More Bees"—Let's be Fair.

For several years I have been urging bee keepers to keep more bees, to make a specialty of the business, yet many of them seem to resent the advice. If a man makes a failure of bee keeping, or

even has a loss, he writes to me, and then at the end of this letter he says, in a sarcastic way, "Keep more bees." One good friend, in renewing his subscription recently, said: "No profit last year. Honey dew. \$4.25 from 23 colonies. Great! Keep more bees." By some strange coincidence, the same mail brought a letter from a good friend over in Ontario, and the postscript to his letter read as follows: "Perhaps it may interest you to know that I am now running 450 colonies, and that my crop last year was 49,000 pounds."

Now it is just as fair to judge bee keeping by one of these letters as it is by the other. There is no business that is free from losses and failures, to decry bee keeping as a specialty because of this, is not logical. Drouths, tornadoes, or floods ruin the farmer's crops; late frosts destroy the blossoms of the fruit specialist; and all of these things are taken as a matter of course, but let there be severe winter losses of bees, or a short crop of honey, and everybody is ready to say that bee keeping is too risky to be depended upon for a living. The real sensible way to do is to keep enough bees so that when you do have a big crop you will get enough honey to keep you over two or three poor years. It is rather wandering from the point, but, by having apiaries scattered in different parts of the country, a total failure is almost impossible.



What are the Advantages of the Power Honey Extractor?

In Northern Michigan we have, or did have, three, 4-frame, Root, Automatic honey extractors. In the past, our idea has been to have a complete outfit at each yard. As we use a two-horse team in going to the out-apiaries, we have been considering the plan of having an 8-frame extractor driven by a gasoline engine. Where only one or two supers to the hive are employed, and the honey extracted before the harvest is ended, to

give room for more honey, thus calling for expeditious work, I can see where the power-driven extractor of large capacity would be of great help. Where men must be hired to help in the work it might be used to advantage. In our Northern Michigan apiaries the honey is not extracted until the end of the season. There is no great hurry, and the work is done in a leisurely fashion. There is one more point: My brother has three boys, men-grown, and I often go up and help extract, so there is no trouble in getting plenty of help. The question arises, would it pay us to use a power extractor? I doubt if it would if the combs could be extracted as clean by hand-power as with a gasoline engine. This point alone might make the use of an engine desirable. In this issue of the Review two veterans tell us how to rid supers of bees without the use of bee escapes, even when no honey is coming in. This plan would enable us to cut out the use of artificial heat—to extract the honey just as it comes from the hives. The most of our extracting would be done in the fall or after the hottest weather had passed, and I doubt if the honey would be so warm as we make it in our warming ovens. I think much more honey would be left in the combs than when the honey is heated up artificially. Now then, it is just possible, yes, probable, that the power-driven extractor might clean out those combs cleaner, even if the honey is not warmed up artificially, than they could be cleaned by hand when the honey is warmed. If the honey is extracted without warming, I think it is safe to assume that the power-driven extractor would secure at least two ounces more of honey from a Langstroth comb. To be safe, let us put it at one pound from a 10-frame super. If we get 40 pounds of honey from a 10-frame super we do well. In producing 20,000 pounds of honey, our usual crop, we extract 500 supers. If my estimates are correct, the use of power would save us 500 pounds of

honey; thus an engine would about pay for itself in one year. The expense of running the engine would probably be not far different from that of warming the honey.

Another question follows on: Is the honey that is left in the combs lost, or wasted? I know that most producers of extracted honey have these combs cleaned up by the bees; either by putting them out in the open air, or allowing the bees to have access to the honey house, or by placing the combs on the hives. I question if any of these steps are taken at a profit. It is a lot of work to carry out hundreds of supers and put them on the hives, then free the combs of bees, and get the combs off the hives, and back into the honey house. If the bees are allowed to have access to the combs out of doors, or in the honey house, there is excitement, commotion, and demoralization in the apiary at a time when the bees ought to be settling down for winter. Perhaps the excitement causes the consumption of as much more honey as is secured. Yes, I know that the honey will candy unless it is removed; and, in the spring, the bees will consume very little of it. They will dig it out and kick it out of the hive. The honey left in the extracting combs is practically lost. As I look at it, the use of a power extractor would enable us to dispense with the warming of the honey, and leave the combs cleaner than when we did warm it and extract it by hand power. If my reasoning is faulty, tell me where.



How do Bees Recognize one Another?

I have just been reading a new bee book, "How to Keep Bees for Profit," written by D. Everett Lyon, and I could not help noticing how many times he referred to the matter of bees recognizing one another by scent or odor. For instance, a queen is caged in introducing that she may acquire the same scent as the colony. If a queen is picked off the combs and handled, then replaced on the combs, she may be attacked because of

the strange odor acquired through the handling, says our author.

It is possible that each colony has a distinctive odor; it would be difficult to prove otherwise; but it is very easy to prove that queens will be accepted without waiting for them to acquire the characteristic odor of a colony—if such exists. Time and again have I picked a queen from a comb in one colony, or nucleus, and immediately placed her upon a comb in another colony, and had her accepted. In the Simmins method of introduction, the queen, after half an hour's fast, is allowed to immediately run down into the brood nest, just about dusk; and that this method is a success I know from repeated trials. I remember once of introducing 40 queens to as many colonies in Northern Michigan, and the work was done by putting each queen in a cylindrical, wire-cloth cage, stopping one end with soft candy, and putting in the cage immediately upon the removal of the old queen. As a rule, I think the new queen was out on the combs in half an hour. It is doubtful if those colonies ever knew that their old queen had been removed.

It is my opinion that odor plays a very small part in the introduction of a queen, if it has any bearing whatever; other conditions, particularly the behavior of the queen herself, have a more important bearing. I recently clipped the queens in the apiary here at Flint (40 queens) and when I dropped one queen back on the comb she started to run, with bees after her, trying to ball her. I shook the bees from a comb down in front of the entrance, and, as the bees were running in I rescued Mrs. Queen and dropped her down with the bees that were entering the hive, and all was well. Bees that have been shook from a comb and are entering a hive will pay no attention whatever to a queen dropped down among them. The queen entering with this crowd is unnoticed, and is soon back on the combs attending to her duties. If it was the scent acquired

from handling that made the bees attack this queen, then the dropping of her down among them did not change the scent.

Bro. Lyon says that robber bees are recognized and repelled on account of their strange odor. Possibly. It is difficult to prove or disprove this assertion. It has always seemed to me that robbers were recognized from their behavior. I have often made up a colony by taking a comb of brood and bees from each of several colonies, yet such a colony would at once repel robbers. Some of the robbers might have come from the very colonies furnishing bees to make up the new colony. Besides this, it seems to me that the mixing of half a dozen different odors must have been somewhat confusing.

The strongest scent-argument that I ever saw was when a small, stray swarm of blacks attempted to force its way into a colony of Italians, and the latter turned in and killed every last one of the intruders. How they recognized them I don't know. It would not seem possible that color played any part.

The only moral that I can draw from all of this is that in introducing queens we can entirely disregard odor as a factor in the problem.

Choosing a Lens for a Camera.

While this is not a photographic journal, many of its readers are interested in photography, and more are taking an interest. I know this from the many inquiries that come to me, particularly from those who wish for hints in regard to the purchase of a camera.

One point is the choice of a lens, and much that is written on the subject is confusing to a beginner. The kind of lens needed depends upon the character of the work that is to be done. If you are going to photograph street scenes, railroad trains in motion, and take snap shots of other moving objects, like race horses on the track, etc., then one of the expensive anastigmat lenses is

needed; and the reason is this: That it will give good definition used *wide open*, thus admitting a great amount of light and allowing of exceedingly short exposures. It is often said that one lens is faster than another. It is more rapid simply because it will give good definition with a larger opening, thus admitting more light and shortening the exposure. It is the size of the diaphragm used that governs the length of the exposure, regardless of what lens is used. By using a small opening, the same definition may be secured with a low priced lens as with the more costly anistigmat.

The anistigmat has, however, another quality, in that the image thrown upon the plate is *flat*, that is, equally sharp all over the plate, while the image, or focus, of the ordinary rectilinear is *saucer-shaped*. If the focus is made sharp in the center of the plate the edges are slightly out of focus, and *vice versa*. As already explained, however, the use of a small diaphragm will bring out good definition all over the plate. By the way, this saucer shape of the image is sometimes really an *advantage*. It often, I might say, usually, happens that we wish to bring out some object, or portion, of the picture more sharply or distinctly, than the rest of the exposure.

If we focus sharply on this object, then use the lens wide open, the object is attained.

If the class of work that you are going to do is such as to allow of time-exposures, that is, one, two, five, or ten seconds, as the case may require, there is no earthly use in paying a big price for a costly anastigmat, as exactly the same results may be obtained with a low priced lens. Simply stop down, and give a longer exposure. Some of the best photographic work that I ever did was accomplished with a single lens (not a doublet) costing only \$6. Unless you wish to make exceedingly short exposures, don't waste money on an expensive anastigmat.

One more point: Don't get what is known as a wide-angle lens, that is, one with an exceedingly short focal length, as it necessitates getting so near the object to be photographed, in order to make the picture large enough, that the perspective is too violent—near objects too large, distant ones too small. Get a lens in which the focal length is at least once and a half the long way of the plate to be used—twice the length of the plate would be better. By the focal length is meant the distance from diaphragm to the plate, when the lens is focused upon some distant object.

Selected Articles.

AND EDITORIAL COMMENTS.

GETTING RID OF FOUL BROOD.

How to do it Without Drugs, Shaking off the Bees or any Loss of Their Work.

The only practical time for the successful treatment of foul brood is during a flow of honey. The most widely known and used plan is that of shaking off the

bees into a new or clean hive, and allowing them to build a new set of combs.

The plan that stands next in popularity is probably the Baldridge; and, by the way, I have often wondered why it has not come into more general use. Perhaps it *appears* too complicated, and it is possible that some fear it may not be effectual.

I have employed it several times, and, really, I prefer it to all other methods. It is less labor than to shake the bees; there is no exposure of the combs, and no danger of bees loaded with infected honey straying into adjoining hives.

This plan has twice been described in the Review, but the Review has since gained many readers, and I think it well to repeat it at this most favorable time of the year for its adoption. Here it is as Mr. Baldridge gave it in the Review 13 years ago.

I am positive that I know how to get rid of foul brood in my own apiary and I see no reason why others cannot do likewise. I think my plan is so very simple and practical that any beekeeper, though a novice, can adopt it, and with the best of results.

In the first place I cage the queen of the diseased colony so as to stop breeding, and then place the caged mother in the top of the hive where the bees can have ready access to her, and likewise so I can get possession of the cage when needed and with the least possible disturbance of the bees. I then bore a hole—say an inch in diameter—in the front end of the hive, a few inches above the bottom entrance, and fasten a metal bee escape over the hole and on the outside of the hive. I do the foregoing towards sunset and then let the colony alone until the next morning.

I now prepare an empty hive by filling the brood chamber with a set of frames—less one or two—filled with foundation or simply narrow strips of the same. I now go to any strong, healthy colony and remove one or two combs of brood, with or without the adhering bees, and place the same in the prepared hive.

I now gently as possible reverse the diseased colony, or turn it end for end, and move it sidewise the width of the hive, or a trifle more, and leave the bee-entrance open—when this is done I then place the prepared hive on the old stand but with its bee-entrance in the opposite direction. This may all be done any time in the forenoon or when the bees are busy getting honey from the flowers. The bees will now on their return from work, or play, enter the prepared hive and remain there, and within two or three days the main force of the matured bees will be transferred to their old location.

Now towards sunset blow a few puffs

of smoke upon the caged queen, to drive the bees away from it, and then transfer the queen to the colony in the prepared hive. She may be given her liberty at once and by the way of the bee-entrance. Now close the bee-entrance to the diseased colony so that no bees can pass in nor out except through the bee-escape, and gently reverse the hive again so that both hives will now front the same way. Both hives should now set close together, or within an inch or so of each other. From now on all the bees in the diseased colony must pass out or through the bee-escape, and, as they cannot return, they must and will go into the prepared hive. In about three weeks all the healthy brood in the diseased colony will be hatched out and soon thereafter all the bees will be found in the prepared hive—and no loss of either bees or labor. The contents of the diseased colony may now be taken to some proper place and be disposed of by burning the same. This is best done in a room or building to which no outside bees can gain access and get at the honey. But it is not necessary that this should be a total loss. Such combs as contain honey and are free of diseased brood, may be extracted and saved for table use, and the empty combs melted and made into wax—those that contain brood may as well be burned up at once—frames and all—as the cost of replacing them nowadays is but a trifle any way.

By this time the prepared hive will or should be full of both comb and brood and without any foul brood or any trace of the disease. In fact it will be and remain a healthy colony. At least that has been my experience.

The now empty hive may, by simply scraping it thoroughly, be used again with no occurrence of the disease. At least that is my belief. But should the reader believe otherwise, then the empty hive may be thoroughly disinfected by simply boiling it in water or by heating it with fire—and this can be done without doing the wood any material injury. When done by fire, simply paint the inside of the hive with kerosene oil and then throw inside of it a burning paper, then watch the fire closely, and when it has done its proper work, cover the hive with a board and smother it out. The inside of the hive throughout should now be about as free of foreign matter as when new. The disinfected hive may now be used and with no danger of any germs of the foul brood disease therein.

The foregoing treatment of the foul brood malady is based upon the generally

accepted theory, which I indorse, that the honey in the combs of a foul-broody colony is more or less impregnated with the germs of the disease. The manipulation given simply but successfully transfers all the bees—nurse bees in due time included—from the foul-broody colony to another hive free from disease and without any of the diseased honey in their bodies, nor in the food the nurse bees may have in their stomachs. All the nurse bees by this plan remain in the diseased colony until their baby-food becomes exhausted, and the method outlined is the only one I am acquainted with that secures this result when the combs of the diseased colony are filled with brood in all stages of its growth.

To conclude: As soon as foul brood is found to exist in an apiary please don't get excited nor foolish and thereupon burn or otherwise destroy the entire apiary. The better way by far is first to ascertain as speedily as possible how many colonies are diseased, mark them, and then let them severely alone until the proper time arrives to treat them. Do not open such hives nor handle the combs unless absolutely necessary and then use care that no robber-bees get a chance to steal and carry off more or less of the honey. Besides, even though not treated at all the first season the disease begins, the profits of the apiary may not be materially diminished. As a rule, this disease makes but little headway until after the first season. But it is by no means pleasant to have foul brood in one's apiary and hence it is the way to get rid of it the same season it is found to exist. The disease does not seem to me to be as dangerous or as virulent as when it first became known in the United States, but this may be owing to the fact that experienced bee keepers discover it sooner and know better how to manage such colonies as become infected. The main danger among novices is that they do not know the disease and hence do not discover it in its first stages, and thereby scatter it among the healthy colonies by changing the combs about from one hive to another.

ST. CHARLES, Ill., Nov. 30, 1897.

The Finest Honey.

We have the finest honey in Texas. It is from the Gatslaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-tf

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying-press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.

GOLDEN ITALIAN

Red Clover and Gray Carniolan Queens Bred From Imported Stock.

PRICES	One	Six	Twelve
Untested	\$ 1.00	\$ 5.00	\$ 9.00
Selected	1.25	6.50	12.00
Tested	1.50	8.00	15.00
Selected	2.00	11.00	18.00

Price after June 15th.

	One	Six	Twelve
Untested	\$.75	\$ 4.00	\$ 7.50
Selected	1.00	5.00	9.00
Tested	1.25	6.00	12.00
Selected	1.50	8.00	15.00

Choice Breeders, \$3.00 to \$5.00.

Choice Italian Queen, mated in my Carniolan apiary, first cross

Price	One	Twelve	Twenty-five, or more
	\$.75	\$ 6.50	50c each

First Cross: We have tested these bees and find them to be real hustlers. We have also had many calls for this very desirable bee, so have decided to offer them to the bee keepers at a low price. Carniolans have many good points to recommend them to the bee keeper, more especially this first cross. The drones are large and very strong flyers, which strength and vigor they impart to their offspring. These bees cap their honey very white, which the majority of Italians do not. They resist diseases very much more than other bees, are gentle, quiet and easy to handle.

CHAS. KOEPPEN

1508 Main St., Fredericksburg, Va.

6-10-tf

PAPER CUTTER FOR SALE

The Review printing office, and another office in town, have joined forces, and, as a result there is a nearly new, Peerless Gem, 25-inch, paper cutter for sale.

The frame is strong and heavy and well-braced, the knife thick and deep, yet it is the easiest working cutter that I ever used. The lever is adjustable, returning from the cut with the least possible exertion, owing to the perfect balance; there are side gauges and front and back enameled measuring gauges.

We paid \$105 spot cash for it only a few months ago, it has always been used carefully, and could scarcely be distinguished from a new machine; in fact, is really worth just as much as a new cutter, yet we would be glad to sell it for only \$80.

W. Z. Hutchinson, Flint, Mich.

Caucasians, Carniolans, Banats, Cyprians.

Select untested queens \$1.00 each, five for \$4.00. Imported breeding queens, \$5.00 to \$6.00. Send to original importer who has spent 13 years in foreign countries investigating these and other races of bees.

Frank Benton, Box 17, Washington D. C.

Bees For Sale

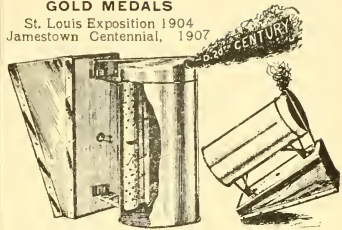
I didn't intend to sell any bees this spring. Instead, I expected to buy more. I probably shall buy some any way—get them of farmers, and transfer and Italianize. Every spring, for several years, I have sold bees, hence, inquires come every day or two asking if I will sell any this spring. So far, I have said "no." There is only one thing that would induce me to sell, and that would be the price. The bees have wintered exceedingly well, have plenty of stores, and have started a lot of brood. The colonies are unusually strong; and, as I stood looking at them the other day, flying so merrily, and filling the air with their joyful hum, the thought came to me, if a man should come along and say, "Hutchinson, I'll give you \$400 for the lot," (40 colonies) I would be tempted to take it; and yet I feel sure that they would bring me in that much honey, and I would have the bees left. Honestly, I would not care to sell a colony for less than \$10.00. If any one cares to pay that much, I'll let a colony go.

The bees are pure Italian, of the Moore strain; the hives new, ten-frame Langstroth; the combs built on wired foundation. There are plenty of bees, brood and stores. I can think of nothing that would make colonies more desirable. Safe arrival in perfect condition guaranteed.

W. Z. Hutchinson
Flint, Mich.

GOLD MEDALS

St. Louis Exposition 1904
Jamestown Centennial, 1907



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is in one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Price \$1.00; two \$1.60; by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2 00.

We sell Danzenbaker hives and supers with metal **propolis shields**, and anything in **bee supplies at factory prices**.

Send your address and B—friends, for catalogs.

F. DANZENBAKER, Norfolk, Va.

6-10-11

Advanced Bee-Veil

Postpaid, All Cotton, 50c; Silk Face, 60c; All Silk, 90c.

Made of Imported French Tulle Veiling; cord arrangement which permits wearer to handle bees in shirt-sleeves with no chance of bees crawling up and under veil. With a hat of fair size brim to carry veil away from face you are as secure from stings, movements as free and unrestricted, and as cool and comfortable as you would be at a summer resort.

Please send me two more bee-veils. I have tried all kinds, and yours are best of all.—N. E. France, Platteville, Wisconsin.

Editorial Comment in Bee Keepers' Review: The Advanced Bee-veil is something that I have worn with great comfort the past few weeks. The peculiar feature of the veil is, the edges are held down firmly on the shoulders away from the neck. This does away with all chance of stings and the hot, suffocating, uncomfortable feeling found in other veils that are tucked in close about the neck—W. Z. Hutchinson.



A. G. WOODMAN CO., Grand Rapids, Michigan

JOIN THE
Michigan Bee Keepers' Association
And Get in Line for Next Fall's Markets.
We Can Help You No Matter Where You Live.

The members of the Michigan Bee Keepers' Association extend to you an invitation to join with them, no matter where you live. We have members in other States, and are getting more. This Association is growing, and there is a reason.

It is taking up the most important part of the bee business, and that is the disposal of the product. For six years we have been doing this with gratifying results. The great cry at the last Convention held in Lansing, in February, was that the members could not produce enough honey to supply the demand.

Right now you are very busy producing a crop, but don't get so busy that you can give no thought to the selling end. That is the end that determines whether your work is in vain or not.

This Association publishes a booklet annually, giving the names and addresses of every member in good standing. This booklet is then advertised in the leading bee journals, and as a result is sent all over the United States. Last year it was advertised for several months in three bee journals. This year it will be more extensively advertised than last. Think what it would cost you to do that amount of advertising personally. And yet your name goes to every one who replies.

Besides this we are going to send every member in good standing the names of 100 buyers when we send the report blanks for them to report their crop on. Practically all of these names are of buyers who do not advertise, so will be new to you. They are some of those who answered our advertisements last year.

Membership in this Association costs you only One Dollar per year, and expires January First each year. Send in your Dollar and receipt will be sent you in full. Add Fifty Cents for membership in the National, if you are not already a member.

Write for circular to

E. B. TYRRELL, 230 Woodland Ave. Detroit, Mich.

Fiftieth or Golden Jubilee Year of the American Bee Journal

Better than ever. If not now a subscriber you will want it regularly. Most helpful aid to successful bee culture—32 pages, illustrated—\$1.00 a year. It tells all about the best way to manage bees to produce the most honey; with market quotations, etc. A dozen different departments—one for women bee keepers—Best writers.

New Subscribers Only

Name.....

Postoffice.....

State.....

IT WILL INCREASE YOUR HONEY-MONEY!

If you will send us your name and address with Sixty Cents (stamps or coin) together with the coupon herewith, we will send you a trial trip of the Bee Journal for twelve months. Better order now. Sample copy free. Address

AMERICAN BEE JOURNAL

146 WEST SUPERIOR ST. CHICAGO, ILL.
2-10-71

— A full line of —

BEE KEEPERS' SUPPLIES

My patent section machine at half price. A new queen nursery and queen rearing outfit. Queens from imported Italian, Caucasian and Carniolan stock; also Adel queens. Send for catalog and price list.

CHAS. MONDENG,
160. Newton Ave., North,
North Minneapolis, Minn

4-08-1f

Marshfield Sections,

Until further notice, \$4.00 per 1000 for No. 1. Best Dovetailed Hives, with Colorado covers, 8-frame, \$1.35 each; 10-frame, \$1.45 each. All other supplies as cheap. Berry baskets and crates kept in stock. Catalogue free. Address the Bee Supply Man of Central Michigan. 2-10-71

W. D. SOPER, Jackson, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.



"If goods are wanted quick, send to Pouder."

Established in 1889.

Bee Supplies

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, Veils and a complete stock of Root's standard goods at factory schedule of prices. My equipment, my stock of goods and my shipping facilities cannot be excelled and I ship goods to every state in the Union. Finest white clover honey on hand at all times. I buy beeswax. Illustrated catalog of Bee Supplies sent free,

Walter S. Pouder

859 Massachusetts Ave.

INDIANAPOLIS, IND.

Write Us For Prices

We will make you delivered prices by return mail, on anything you may want for your apiary.

We Manufacture

Dovetailed Hives, Hoffman Frames. Sections, Separators, Shipping Cases, etc. Also Berry Boxes and Crates.

There Are No Better HIVES Than Ours.

Prices the Lowest. Satisfaction guaranteed, or money refunded.

Minnesota Bee Supply Co.
Nicollet Island
Minneapolis, Minn.

You are a Bee Keeper

So am I

Then in that respect you and I think about the same. All bee keepers are nature lovers—and some are devoted students. Then you and I meet again in that class.

Therefore, as you and I are so much alike, a magazine that I make in the fashion that suits me will fit you also. I make

The Guide to Nature

and will send you a copy for 10c. Then you can judge for yourself whether I am right in all these surmisings and theories.

Edward F. Bigelow

Apiarian Laboratory
Arcadia, Sound Beach, Conn.
2-10-61

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

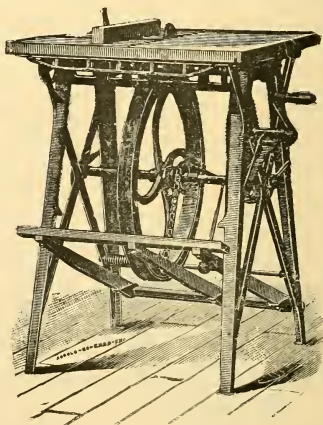
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

381 Ruby Street
Rockford, - Illinois



Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—We quote as follows: Fancy white comb honey, 16 to 17c; No. 1 white, 15 to 16c; fancy white extracted, 9 to 10c; light amber, 7 to 5c; beeswax, 32c.

BLAKE, LEE CO.
4 Chatham Row,
Boston, Mass.

Mar. 10, 1910.

KANSAS CITY—Our market is entirely bare of comb honey, consequently no quotations to make. White extracted, 6½ to 7c; beeswax, 25 to 28c.

C. C. CLEMONS & CO.
Kansas City Mo.

April 15, 1910

CHICAGO—Trade is meager in comb and only fair in extracted. We quote as follows: Fancy white, 18c; No. 1 white, 15 to 16c; fancy amber, 11 to 12c; No. 1 amber, 9 to 10c; fancy dark, 9c; No. 1 dark, 8c; white extracted, 7 to 8c; amber, 6½ to 7c; dark, 6c; beeswax, 32c.

R. A. BURNETT & CO.
199 S. Water St.

April 15, 1910

DENVER—We quote our local honey market as follows: No. 1 white, per case of 24 sections, \$3.30; No. 1 light amber, per case, \$3.15; No. 2, \$3.00; white extracted, 7½ to 8½ cents; light amber, 6½ to 7½ cents. We pay 24 cents per pound for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASSN.
F. Rauchfuss, Manager.

Sept. 22, 1909

Denver, Colo

TOLEDO—The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.
Feb. 19, 1910. Toledo, Ohio

CINCINNATI HONEY MARKET—The demand on all grades of honey is easing up as the weather grows warmer. Fancy comb is selling at 16c and 17c per pound b; the case from the store. Extracted extra fancy, table honey, is selling at 9½c per pound and white at 8c per pound. In 60 pound cans. Amb r honey in barrels at 6c and 7c, according to the quality and quantity bought. For beeswax we are paying 29c cash delivered here, or 31c in trade if it is nice bright yellow free from dirt.

THE FRED W. MUTH CO.
April 15, 1910. 51 Walnut St. Cincinnati, Ohio

NEW YORK CITY—There is practically no trade in comb honey at this time. Stocks are fairly well cleaned up, and we do not expect that very much will be carried over. There is some little demand at the following prices: Fancy and No. 1 white, 14 to 15c; No. 2 white, 12 to 13c; dark, 9 to 10c. Extracted in fair demand, with sufficient supply from all over. We quote: California white, 8 to 9c; light amber, 7 to 7½c; alfalfa, light, 7 to 7½c; Southern in barrels from 60 to 75c a gallon, according to quality. Beeswax steady at 35c.

HILDRETH & SEGE, KEN
April 16, 1910 265 Greenwich St.

WANTED—150 colonies of bees.
3-10-tf **H. L. SOPER**
112 Thompson Ave., Jackson, Mich.

We are Headquarters for

ALBINO BEES

The Best in the world. If you are looking for the bees that gather the most honey, and are the gentlest of all bees to handle, buy the Albino. I can furnish the Italian, but orders stand fifty to one in favor of the Albino. I manufacture and furnish supplies generally. Circulars free. Address

S. VALENTINE

Rocky Ridge, Frederick Co., Md.

4-10-3c

Golden and Red Clover Italian Queen Bees

Our Goldenbees are as good as they are beautiful. Our long-tongued red clover stock is as good as the best. Queens sent by return mail in the season. Select, unested queens, \$1.00 each; three for \$2.75; six for \$5.00; one dozen, \$9.50; tested, \$1.50; select tested, \$2.00. Let me send you my descriptive circular of queens, nuclei, bees by the pound, etc.

5-10-3t

VIRGIL SIRES, North Yakima, Wash.

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

Save Queenless Colonies.

Introduce vigorous, tested queens. We can supply such queens by return mail, at \$1.00 each. These are healthy, prolific, Italian queens, reared last fall, and wintered in four-frame nuclei. There are none better. Prompt attention given to all orders, and satisfaction guaranteed. Send for price list.

4-10-tf

J. W. K. SHAW & CO., Loreauville, La.

Root Automatic Extractors



No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$23.00

No. 27—Four-frame Root Automatic for frames not over 11 $\frac{3}{8}$ in. deep, 34 in. in diameter (weight 210 lbs.) 27.00

No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00

No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00

GASOLINE ENGINE with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

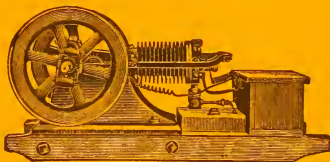
the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



The A. I. Root Company, Medina, Ohio

JULY, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 248.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, July 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Clubbing List

I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1 75
American Bee Journal, (new)....	(1 00).....	1 75
Canadian Bee Journal.....	(1 00).....	1 75
Ohio Farmer.....	(1 00).....	1 75
Farm Journal (Phila).....	(.50).....	1 20
Rural New Yorker.....	(1 00).....	1 85
The Century.....	(4 00).....	4 50
Michigan Farmer.....	(1 00).....	1 65
Prairie Farmer.....	(1 00).....	1 75
American Agriculturist.....	(1 00).....	1 75
Country Gentleman.....	(2 50).....	3 15
Harper's Magazine.....	(4 00).....	4 10
Harper's Weekly.....	(4 00).....	4 20
Youths' Companion.... (new)....	(1 75).....	2 35
Cosmopolitan.....	(1 00).....	1 90
Success.....	(1 00).....	1 75

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60 pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-1f

Mott's Strain of Italians

By return mail. Untested, 65c; 6, \$3.80; 12, \$7.50. Natural Golden from Imported Stock, selected, \$1.00 each. Send for descriptive list. Leaflets, safe plans of introduction of Queens, 15c each. Leaflet plans of increase, 15c each, or copy of both for 25c.

E. E. MOTT, Glenwood, Mich.

7-10-1f

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{8}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

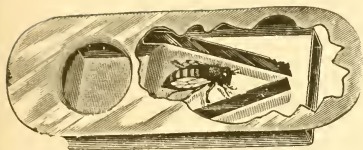
Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.



Advantages of BEE ESCAPES

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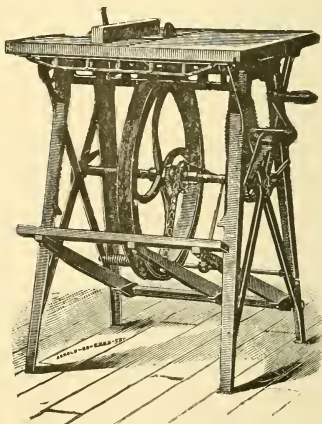
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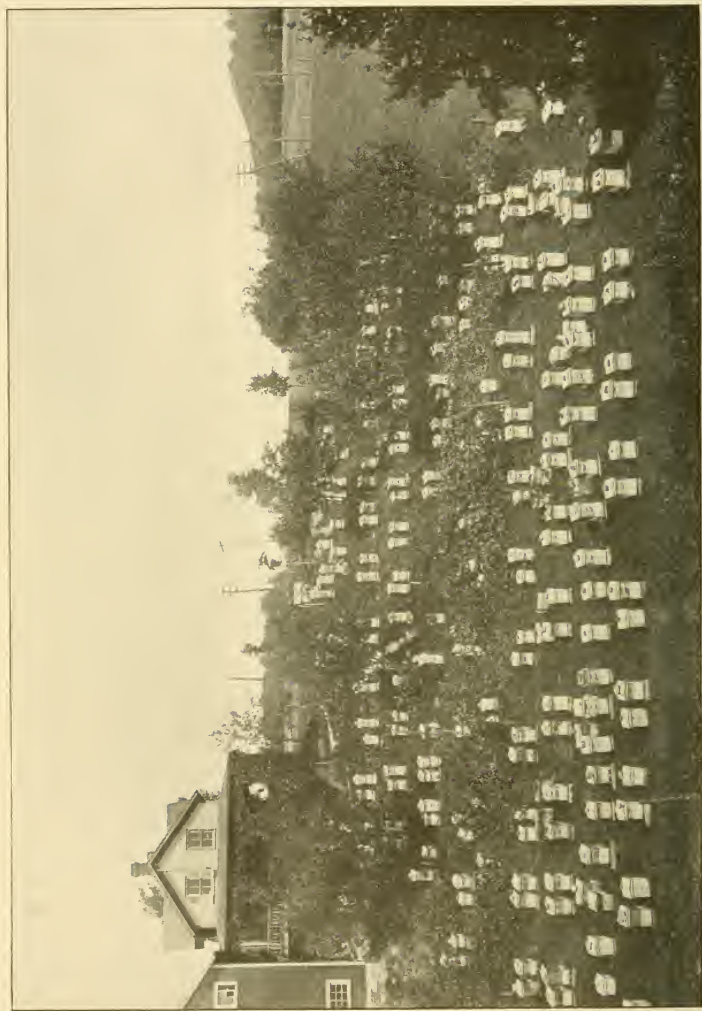
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Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, JULY 1, 1910.

NO. 7

Greatly Increasing the Honey Crop by Selection in Breeding.

GEO. B. HOWE.



I N writing this article, it is not to advertise queens for sale; as I am a honey producer, and can make more money producing honey. It is written simply to help the bee keeping world

to improve its bees, and to produce from one-third to double the honey that it is now producing. I know this can be done, as I have done it. My best breeding queens are not for sale at any price. I have sold some queens for ten dollars, taking them out of their colonies before the honey flow, and I lost money *every time*; for these colonies would make me ten dollars' worth of honey, even in a poor season, and some seasons *three times that*. I cannot afford to rear queens for sale—seasons are too short and unreliable.

Let us compare the breeding of bees to the way they are breeding animals

and poultry. Do these successful breeders use any old male that they may have, or any female, as well? I think you will find them selecting and breeding from the best.

I wish to say that I have just a fair location. The soil is mostly sandy, with clover, and some basswood, no buckwheat, a little goldenrod, so you can see, you who are favored with a first-class location, that you can easily get larger yields than I could possibly get.

DARK ITALIANS IN THE LEAD.

It may be interesting to the readers of the Review to know of my experiments, and the results that led to my selection of the dark, leather-colored Italian bees. I know there are yet many good bee keepers who said, and who still say, that the hybrid is as good, or even better, than the pure Italian. I bred the hybrid Italian-black, and the Carniolan-Italian crosses for several years, and will admit that I had some wonderful colonies of these crosses; but, after breeding them for years, I found that the three-banded Italians would average at least one supe

per colony more of honey; and, as honey was my aim, I discarded hybrids.

I am led to believe, however, after years of careful breeding, that the Italian, at its best, is a *hybrid*. We all know how hard it is to keep them uniform in color and markings, and how quickly they will degenerate back to the black bee. I found that I could take a yellow queen from an Italian queen-mother, mated to a black drone, and some of these (not all) when mated to Italian drones would produce three-banded bees. If I breed these for several generations, each time selecting the yellow queens, they breed true to color every time. So, you will see, you can cross your bees with any other race, and, in a short time, by selecting and breeding, get them as pure as they were before the cross was made. I am just as sure that I can take the average Italian bees as they are now bred, and, by selecting the dark queens and dark drones can, with three crosses, breed the black bee with all its characteristics. The color factor is a *great guide* to go by.

Take a strain of Italians like mine, that has been bred by selecting the dark queens, and you will find that their drones are very dark, and their queens are also dark; that is, the majority of them are, although the workers are all nicely marked three-banders, only dark.

I have a queen bred by Mr. D. R. Hardy of Burr's Mills, N. Y. She is at least one-third Carniolan, as he breeds the Carniolan-Italian along my line of breeding. Now, this queen, mated in my yard to an Italian drone, breeds as true to color as my own queens. I bring these things up, by just touching on facts, so that you may better understand the breeding of bees.

You all know, or should know, how hard it is to get a perfect male, and how few of them there are in the animal world, even with all the advantages we have in selection over the male of our bees. There are so many inferior males o one perfect specimen; and we, as a

whole, pay so little attention to our drone-mothers, is it any wonder that we have not advanced in the breeding of bees as we should?

I know there are some who have bred bees, as to color, most beautiful to look at, but, in all those beautiful colonies of bees that I have had, not *one* was up to the dark colonies as to gathering honey. I wish I could report otherwise, for I am not blind to beauty. I find, after fourteen years of breeding, that these dark queens will breed some very yellow queens, but nothing like the goldens.

This field of breeding for honey has scarcely been touched; and as I found the dark, leather-colored bees superior, I naturally selected them. I found some strains of Italians inferior, however, even to the common black bees. There seems to be *two strains* of the common black bees. The strain that is *brown* (not black) is superior in every way. They are larger and more quiet. I find that the bee keepers who stand up for the black bee have the *brown race every time*.

I got an Italian queen of L. H. Robey, and she proved such a wonderful queen that I reared a number of queens from her, and they proved superior to all others. I used her for a breeder as long as she lived. About the time she died I found one of her daughters to take her place. This queen proved a wonderful breeder. The only fault with these bees is that some of them would cap their honey thin, or "greasy," as some would call it; and, as these queens were generally some of the best, I did not like to kill them. I tried ventilation, but it did no good. I found that this was a *trait of certain colonies*; that by changing the queen I stopped it every time. I wish that it could have been stopped with more ventilation, for it would have saved some fine queens for honey. I found, however, that by breeding from queens whose colonies capped their honey white, reduced this trait very much, although

we will get now and then one that will cap their honey thin. I had to kill all such queens at that time, but now, with out-yards to take them to, I can save them, but I would not have them in my breeding yard at *any price*. If you had fought this one trait as I have, you would not blame me.

Now, as I was breeding for honey, paying no attention to *color*, only as I want a breeder whose bees show three bands, I will use no other—a pure mother every time; I do not care how dark they are.

BIG YIELDS OFTEN COME FROM "SPORTS."

For a few years I bred from the queen that gave the largest yield of honey, but I found that was not a good rule to go by, as some of those very best queens proved to be poor breeders. In fact, I test every one, and have been often disappointed in them. But, when you do get one of those high flyers that is a *good breeder* you have got a *prize*. My best breeders are always above the average on honey gathering, and are queens that winter perfectly, build up fast in the spring, are very prolific, and, also are good to keep their hives full of brood and bees, not stopping all brood rearing if the honey flow is poor, as the average Italians do.

It was about in 1900 that I got a queen with Gleanings in Bee Culture, as a premium. This red clover queen was one of the best breeding queens that ever lived. Had the ones that made fun of the long tongues and all sorts of comments, taken one of the daughters of that famous queen, and done a little selecting and breeding, we would have far more superior colonies at the present time. I reared queens from the Root queen and mated them to the Robey queen's drones. I got a great variation as to color, traits and characteristics. The next season I used a Robey queen, mating the young queens to the red clover queen's drones. I got so many good queens from this queen that I used her three seasons as a breeder, discard-

ing all the Root, except a few of the best ones, each season culling all inferior queens, only keeping the best, replacing all poor queens with a daughter of the breeder. I called this queen *Pride*, and she was well-named, for in her fourth season she produced 168 boxes of comb honey, and nearly every one of those boxes was extra fancy honey. During her four seasons she was one of the *best*, producing over 200 boxes of comb honey for two of those seasons.

DON'T FEAR INBREEDING.

I thought I was inbreeding most too much, so I used a red clover queen, as a breeder. I got some wonderful queens from this queen, but they did not average up to the others. I had tested three or four of the best Robey queens for breeders, using the one for a breeder whose daughters gave the largest average—not *one* queen, but *all of them*. I want a queen for a breeder that will *reproduce* herself, so strong in all good points that her daughters are very even in honey production.

What main points are we to look for in a breeding queen? A queen whose colony winters perfectly, the bees must be *extra* honey gatherers; she must be prolific and have her brood very compact, literally filling about every cell in the comb; not using six combs for brood when it would not fill four combs, filling the combs not only to the bottom bar but to the top bar as well. I look well to this trait. I am talking about the regular L. frame. But they will fill the Jumbo just the same way, maybe not crowding the top bar so close as in the regular frame.

I never use a queen whose colony daubs up every thing with propolis. Did you ever stop to think how much this trait costs the comb honey producer in cleaning his boxes and supers? I find that by careful selecting and breeding this can be reduced one-half.

BITING OF CAPPINGS MAY BE BREDED OUT.

Biting the cappings and combs when disturbed can be reduced by breeding.

I have seen supers of fancy honey ruined by the bees uncapping their honey when the escape board was put under the super. Black bees are more inclined to this trait, some strains of Italians are bad.

I look well to see if they tolerate the bee moth. If I find a colony that tolerates wax worms in their combs, the queen is not used even as a drone-mother. I also breed against swarming, not using a queen given to this trait. Seasons and the bee keeper do much to encourage swarming. Size of brood nest or hive have much to do with it. Carniolans are great swarmers; a strong trait and hard to breed out of the pure race, but can be overcome by crossing with an Italian drone. I merely mention this to show you that the trait is in the *race or strain of bees*. I find that the colony that *never swarms*, or, seemingly, thinks of it, has the bees that roll in the honey.

VALUE OF LONGEVITY.

What a great difference in colonies as to longevity. Some colonies whose queens are the most prolific do not seem to have any more bees than other colonies that have less than half the brood or seemingly so. By taking some of these colonies to make nuclei for mating our queens, we can tell to a nicety where the trouble is; keeping records of when made and when the last bees hatch from the brood of that queen. Bees don't show much vigor that are short lived. I keep a record of all queens; that is, to a certain extent.

I observe my breeders, or all prospective breeders, to see if the bees get out early in the morning, and if they work late in the evening. I also look to see if they dart away like a flash on leaving their hive, and, on their return, that they enter the hive so quickly that it is hard to catch one unless it is cool. This tells you that they have a strong homing instinct. I am thinking of the old workers. I find that colonies with this trait hardly ever lose a virgin queen in her mating

flights. The workers do not lose a second on leaving the hive, nor in their return. The bees that get the honey do not hang around the hive. If you had ever bred the homing pigeon, you would better understand this trait.

THE FOUNDATION FOR MY STRAIN.

Now, after inbreeding these bees for 11 years or more, I got the best queen-mother I ever had. This is a Robey queen, or from that strain on her mother's side, and everything leads me to believe that she was mated to a Robey drone. I have the color fairly fixed in this strain. The bees are easily detected from any queen mated to these drones. This queen is No. 58. She has wintered perfectly every winter. She will be four years old in August next, has produced a large crop of honey every season, and is the mother of more extra good queens than any two breeding queens that I ever had. I do not know just how many hundreds of queens I have reared from her, and scarcely a poor queen in the whole lot of them. Even the queens that are mated are good honey gatherers—some are hard to beat. I have some most promising young queens from her; that money can not buy.

I can not boast of beauty in my bees, but, when it comes to honey, I will leave that for some of the parties that have this strain to tell. Not only are these bees superior in a good season, but show their breeding in a poor season, producing a fair crop of honey, while some other strains scarcely make a living.

I bought 70 colonies of black bees last spring (1909) putting them $3\frac{1}{2}$ miles from the home-apiary, in a better location, if anything, than the home-apiary, which had 250 colonies, mind you I run the out-yard, using full sheets of foundation in most of the shallow extracting supers, running them mostly for extracted honey, and they produced a little less than one-half as much per colony as the home-yard did, run for *comb honey*. I said "mostly full sheets of foundation," the rest was drawn combs. There w

more work and care to each colony than in the home-yard.

The drone is the son of his mother. He has a grandfather, but not a *father*—direct. You can see that the drone-mother should show all the qualifications of the queen-mother, and *more*, for her drones must be uniform in size. You all know that some queens that are good queen-mothers are poor drone-mothers; now, when we find that they are all O K as to size, look well as to their wings. Here is where you will find the worst defect. Some queens produce lots of drones with imperfect wings; *don't* use such a queen for a drone-mother. Some queens breed not only bantam queens and workers, but drones as well. What I mean by "bantam" is a runt-like bee. It is not caused by starved brood, but these queens will breed this way *all the time*. It is not caused by the size of the cell; it is some defect in the *queen*. I have no use for such queens.

Now, as you see, I test all my queens that are promising breeders, to be sure that they are good breeders as well as good honey gatherers. It will not do to *guess* at this business. After you are sure that you have a good queen-mother, rear all your queens from her. (We will say in 1909.) Now, in 1910, use the same queen-mother, mating her queens to her daughter's drones. I suppose it would be safer to trap all of your breeding queen's drones. I never have done this, but do not allow any drone comb in her hive, to speak of, just a few cells, sometimes cutting off their heads occasionally. Now, cull out every poor queen, replacing them each season as long as you use the same queen-mother; *always* giving the best drone-mothers a full comb of drone comb anyway, and more will do no harm.

HOW TO MAKE A START.

Now, be fair with your bees; get the best queens that you can find, of some one else, not one but three or a half a dozen. Give them a fair trial with your own, and, as long as you find your own

strain giving you more honey per colony, keep right on breeding from them, testing your breeders, always on the lookout for a colony that is doing a little better than the rest. Some of these sports are good, more are not desirable. If, at any time, you find that some one has better honey gatherers, get a good breeder, a tested breeder. Now, mate her queens to your best drones, you will get some surprises, or I lose my guess. You will find it is diamond cut diamond. The strongest strain will win out, and it may be the poor traits that are the most active.

HOW I WOULD START ANEW.

Should I lose all my bees of this strain, I would get, say, six untested queens of each of the two best queen breeders that claim that their bees are superior honey gatherers. I think that you would get one queen out of the six that would be a good one to breed from for a queen-mother. From the other six I would select my stock for drone-mothers, using the best queen daughters for drone mothers. Cross these two strains. Now look for your ideal queen; and, when you find her, rear all your queens from her for drone-mothers, requeening everything in the yard, unless you have an extra good queen that you wish to keep, but restrict her drones in some way. Now use the same queen-mother as long as she lives, repeating the same thing for years, for, do you not see that I got my best results when I used this method of inbreeding? As each queen mates to a different drone do you not see that it is hard to inbreed bees, and as you are using the very best all the time for breeders, selecting only the good and culling all inferior queens, what is there to hinder you from fixing every trait so it will be hard to lose them? Old 58 was set out of the cellar March 26th, 1910, and on April 16th, the colony had five frames of brood.

I wish every one who reads this could see those frames of brood from a queen in her fourth year. This has been an

unusual season, for the bees got pollen the same day that they were set out of the cellar, but the imported breeding queen direct from Italy that I received June 7, 1909, has less than one-half as much brood; so much for selecting and breeding.

ONE HUNDRED DOLLARS FOR A BETTER STRAIN.

I will repeat what Editor Hutchinson says in *Gleanings*, I will gladly give \$100 for a queen superior to my stock. Let's figure just a little bit on that one hundred dollars for a queen: As I have nearly 400 colonies, say that they give me five pounds more per colony; that would not be much for one colony, but figure it on even 300 colonies, that would be 1,500 pounds. Would not that pay for that queen the first season and give me a good profit besides? I will say that

when you take this up in earnest you will not stop at *any price*.

I clip every queen, so as to know that if I find any queen with wings that she has been superceded. I do not see how any one could swear that a queen had lived so long, unless she had been clipped. I know my queens better than most farmers know their cows, yet I clip them to make *sure* that I know what that queen has done. I replace all queens in my home-yard, where I rear and mate all my queens, that I do not know their pedigree. I clip the right wing in even years and the left wing in odd years. I number all my queens, and that number follows each queen as long as she lives. Thoroughness and persistency are the price of success.

BLACK RIVER, N. Y., April 16, 1910.



Cappings-Melters not Suitable for Out-Apiaries. The Proper Place for their Use.

E. D. TOWNSEND.



THE cappings melter for out-yard work has not been very much of a success with us. The two we have used did their work very well, but were of too small capacity. Even were their capacity of

2,000 or 3,000 pounds daily, so they would handle all the cappings that were required of them, there is still that about them requiring too much work, for the results obtained. To illustrate: At two of our out-yards, water for use is drawn in 60-pound cans. This taking water to the out-yards with which to run the melter is not such a very serious matter, but it is something; then there is the

gasoline. One afternoon we burned all of the gasoline we had with us, so had to quit extracting earlier than usual. The most serious drawback, however, in using the melter at out-yards, is the getting started in the morning. It takes an hour or more to heat up the melter, and get ready to begin work, using cold water, as we have to in this case. Then all burners on the gasoline stoves do not work as well as we would like them too. With the two melters we have used, two burners were necessary to keep them going, so as to accomplish anything. Besides this, there was a third burner with a teakettle of water heating to fill the melter tank as the water boiled away. There is much more slum-gum in cappings than is generally supposed; and the melter has to be cleaned of this, once or twice a day. To

clean out the slum-gum from the melter, necessitates the stopping of work until the cappings are melted. This, however, is not so serious a matter, as we usually do this just after dinner, or after the day's work, when the cappings are likely to be all melted, thus causing no delay. Taking it all in all, there is a considerable more work connected with the cappings melter, than with the McIntyre box, and this at the busy season of the harvesting of the crop of extracted honey.

The advantages of the melter are, the finishing up of the work as we go along, and securing, in marketable shape, the eight per cent. of honey that is usually left in the cappings; and, as far as I can see, the 15 per cent., or more, of honey that goes through the melter with the cappings is the equal of that that has not gone through the melter, and is worth in the market, likely, 25 per cent. more than the eight per cent. that is left in the cappings after the McIntyre box has done its work.

We expect, however, with our larger McIntyre boxes, giving us more drainage surface, and by the use of a little more care in chopping the cappings fine, to bring this eight per cent., now left in the cappings, down to, say, five or six per cent. This will not be so serious, especially as we save this honey at wax-rendering time, after the season's hurry is over.

This brings me to the point where the cappings melter has come to stay, *i. e.*, the removing in marketable shape, of the honey from the cappings; honey that was formerly thrown away. The management is something as follows: After all the honey has drained from the cappings in the McIntyre box, they are forked into cracker or sugar barrels and shipped home, where they are run through the cappings melter at leisure, thus separating the honey from the wax. In two years, \$45.00 worth of honey has been secured in this way; honey that had previously been dumped out with the water in rendering wax. During these two years about one-third of our honey

was put through the melter as we extracted, had this amount been added to the above, this sum would have been swelled considerably. At the lowest estimate, we have been throwing away \$30 00 a year in honey, that we now save with the cappings melter.

In commenting upon the cappings melter, I said that, as far as I could see, the honey secured with the melter was equal to that secured where the McIntyre or other uncapping tank was used, without heat.

I question, however, whether it is *quite* as good, and on these grounds: In melting the cappings after they have been drained of all but about eight per cent. of the entire crop of honey harvested, we find that this eight per cent. of honey is quite inferior to the main crop, and, as I have previously said, brings only about 75 per cent. of the price secured for the main extracting, and goes for baking or manufacturing purposes.

If the honey that goes through the cappings melter in the ordinary way, as when the cappings fall from the uncapping knife, in extracting, is discolored as is the honey taken from the cappings after draining through the McIntyre box, it would seem as if the whole crop would be somewhat tainted, but, being distributed through the whole crop, it is not noticeable.

The cappings melter used for the last two years is shown at the right, in the frontispiece of the May Review. It is made of galvanized steel, is 22 inches long, 14 inches wide and 10 inches deep. Two and a half inches of the depth is used for the water tank at the bottom, so the tank proper is only $7\frac{1}{2}$ inches deep. The square opening at the back end, is for filling the tank with water. At the front end, near the bottom, is a gate for the honey and wax to run out. Longitudinal of the melter, at the inside bottom, will be noticed three A-shaped, or inverted troughs. These troughs are notched along their entire length, on both edges and are called channel irons, and are to preserve an opening for the melted

wax and honey to run to the gate, no matter how many cappings are piled in the melter. Although this melter is worked with a two-burner gasoline stove,

it is of too small capacity, and another one built on somewhat different plans is in course of construction.

REMUS, Mich., Mar. 7, 1910.



Is the Bartlett Method of Treating Foul Brood Open to Charge of "Nastiness."

J. L. BYER.

JUST at present, we are *very* busy with the bees. Extracting honey or piling up supers on the hives, you ask? Well hardly that, as we are unfortunately having an experience this spring, unprecedented in our bee keeping history, and instead of reckoning up the amount of surplus on the hives, we are hustling from one yard to another feeding the bees to keep them from starvation till the clover comes into bloom. Very early spring opening, with unusually warm weather for the time, then about the 20th of April a change to cold weather which has continued to date with no immediate prospects for warmer days. This explains in a nutshell the why and wherefor of our present necessity.

Being so busy, you will no doubt wonder what has made me take time to write, and, dispensing with all preliminaries, might as well say at once, that that article of friend Bartlett's in the June Review, "stirred me up" and I will not feel all right until I "get it out of my system."

Foul brood, while not a very savory subject for discussion, is unfortunately a question that bee keepers must be interested in, if they expect to make a success of the business—at least that is so in our locality, for it is continually cropping out in places where we are not looking for it, as, to-wit, only a few days ago I ran across a rotten lot of bees within a mile of my Cashel apiary—my *one* yard where I fondly imagined there to be the least bit of disease near.

Naturally, then, we are interested in every method given for the eradication of the disease, and needless to say the article of Mr. Bartlett's was read as soon as the heading was noticed. Now I am not going to question Mr. Bartlett's statement that the treatment described cured the colonies, although if I had not heard his verdict, I would have hazarded the guess that the disease would have reappeared in a good many colonies, if they were very badly diseased in the first place. What I do want to register a protest against, though, in the most strenuous manner in my power, is the *nastiness* about the system that must be apparent to all who have had much experience in the handling of foul broody combs. Let's see for a moment what the condition of those brood combs hoisted above will be in the end of the 21 days that Mr. Bartlett speaks of as being necessary to leave them before extracting—that specified time being, of course, necessary to allow all the brood not diseased to hatch out. The cells that have had dry scales in them will, of course, be nicely filled up with honey—the scales being left there to soak. All the dead larvae that have not reached the dried state will be in the cells in that nice ropy condition—you know how it will stretch out on a tooth pick, like an elastic bit of rope. Among all these varied forms exhibited in the various stages of the disease, will also be many capped cells with foul larvae, the cappings having the small perforations so characteristic of the disease. Among all this

conglomeration will also be honey—some unsealed and some sealed, and through it all will pass the honey knife when the combs are to be put through the extractor. Now, I haven't painted the picture one bit too black, as I have seen the exact condition described in supers where ignorant bee keepers had hoisted brood combs from foul broody colonies.

The *nastiness* does not end with the uncapping, though, as a certain bee keeper with whom I am well acquainted told me of his experience in trying to extract a lot of combs from foul broody colonies, right in the honey flow, after the bees had been treated by the shaking plan. He stated that the ropy, rotten larvae would actually fly out in the extractor, and although the honey was intended for manufacturing purposes, he was simply disgusted with the whole business, and one experience was enough for him. Of course, the proper method in cases of this kind is to first cut out all portions of comb having brood in them—with friend Bartlett's plan this is impossible. In all sincerity, if anybody was to offer me honey to eat, taken from foul combs in the way described, I certainly would take it as a gross insult, and I am afraid that my stomach would act much in the same way as I once observed in a man who was sucking eggs, and, in the course of his operations, he happened to swallow one that was awfully rotten. Needless to say he did not need to take an emetic to bring it up again. Of course, what the eyes do not see, the heart does not grieve over, and, obviously, honey extracted from rotten combs would not have its chances of sale improved upon, by telling of its origin.

Now please do not think that I am one of those who are "over nice," as such is not the case, and I cannot do better to explain my position in these matters, than to speak of an eccentric old gentleman, who formerly lived near us, who sized the question up nicely by always saying "that he did not object to *clean* dirt, but he did hate nastiness."

The Baldridge plan, which you rightly commend, works just the opposite to the Bartlett plan, in so far as the storing of honey is concerned, for instead of honey being stored among the foul cells, from the moment the stock is moved no more storing is done in that hive, and the bees, as they emerge from the cells till the age that they fly out of the hive, are constantly drawing on the honey in the hive. The result is that, at the end of the 21 days, the brood nest is entirely empty of honey, what is left being in the outside combs and in the tops of the others. Then it is a very easy matter to cut out all the brood area before extracting the honey, if extracting is to be done.

You ask why the plan has not come into more general use. Just because a plan like that cannot be intrusted to the majority of bee keepers who have foul brood, that the inspectors have to deal with. The danger-point with careless men, is the getting rid of the old combs, and the shaking-on-to-foundation plan, gives the best excuse for quick work in disposing of the diseased combs.

In glancing over what I have hastily written, I fear I have been too severe in my language, and I am sorry that I do not enjoy a personal acquaintance with Mr. Bartlett, for fear he may misjudge my motives. However, Mr. Editor, you will have to explain that, after all, the writer is not to be taken too seriously in anything he says, and personally, if I have over-stepped the proprieties of journalism, I hasten to beg his pardon, even before being asked to do so. I cannot think for a moment that the apiary that Mr. Bartlett cured, could have been very bad with foul brood, for certainly the repulsiveness of the method would have been noticed by him if such had been the case. When we have other plans that involve no more or less work, that offer the minimum chance in the way of distributing disease germs in the extractor and other places, and that are so much more to be desired from other standpoints, by all means use them.

Readers of the Review are not apt to be treating any colonies that are very badly diseased, by the plan outlined by Mr. Bartlett, but suppose that article should be copied in some of the farm journals, just imagine the nice samples of *honey and et cetra*, that might be offered to the unsuspecting public, by some careless bee man, that might be led to try the plan that looks so economic.

There, now, I feel better, so will lie away to bed, expecting to drive out to an out yard in the morning with a load of sugar to be transferred into about 100 hives before I return again.

MT. JOY, Ont. June 7. 1910.

[Of course, I did not hesitate a moment about making room for the foregoing in the Review, but I thought that Mr. Bartlett might like to make some explanation or defense, so I sent it to him with request to make any reply that he deemed necessary. The following came to hand:

EAST JORDAN, Mich., June 15, 1910.
Friend Hutchinson:—

When I decided to tell how I treated foul brood some years ago, I concluded that a bee convention would be the place to introduce the subject, as I wanted it brought before the best bee keepers and discussed.

I wrote an article and sent it to the Secretary of the Michigan State Bee Keeper's Convention, at Lansing, to be read, it being impossible for me to attend.

The Secretary wrote me that it caused a discussion which was very favorable.

This article was then sent to the editor of the Review, he having asked for it, and was told to use it if he thought best. After asking several questions about the plan, the editor simply published the mere plan outlined, without any comments. (Pages 178-179 June issue.)

In the above reply, by friend Byer, the "nastiness" or filth seems to be the main objection. I will say that in this particular case there was no filthiness; as I would not for a minute harbor the

thought of trying to cure, by any method, a colony rotten with disease. In fact, I was not aware that any up-to-date apiarist would. I always thought that the inspectors of apiaries always burned colonies badly diseased; so I will say, right here, that the colonies that I treated were not badly diseased, as I first burned all that were such, as found the fall previous to the treatment; but, so far as the treatment is concerned, I believe that a colony quite badly diseased (don't attempt, by any method, to cure a colony in a rotten, filthy condition) would come out O K.

As relating to the filthiness of the method, compared with the shaking plan, why I believe it is as clean, if not cleaner. If you extract the honey from the shaken combs, are not the conditions Mr. Byer mentions the same as they would be in the combs treated as I treated them, with the exception that there is *less honey* in them. The ropy state of the larvae is present just the same; and when it comes to extracting combs foul with disease, so that the rotten, decaying larvae fly from the extractor, that is the *limit*.

Mr. Byer could not possibly be more opposed to filth than is the writer, and, if there was the least bit of filth connected with the plan as I used it, it would never have been used.

In regard to people working this plan and flooding the market with diseased honey, there is no danger. Better give them a little once than give it to them every year through neglect of trying a cure because of a satisfactory method.

I refused this paper to one of our Farm Journals because I did not want it brought to the notice of the inexperienced until it was discussed by the more experienced. It seems to me that in this day of foul brood that no bee keeper would ever think of feeding back honey for stimulating or for wintering purposes. Then where is the awful alarm? Always feed sugar syrup, then you are safe—it is better for wintering and cheaper.

I am glad that friend Byer has brought the matter up as above, as it may tend to decide the matter for some that have colonies to treat. My advice is, "burn all badly diseased colonies." Extract no honey from badly diseased combs—regardless of the plan used. Distribute no diseased honey and feed sugar syrup

when you have to feed. Sell others such honey as you would use on your own table. Take a little interest in your neighbor when you can, and all will be better, if not well.

Respectfully,

IRA D. BARTLETT.



Bringing the Season to a Close and Caring For the Crop.

S. D. HOUSE.



AS we near the close of the white honey flow, about three days from the close of basswood, we cease giving new supers; and at the close of the flow we take away all

except one super from each colony; and, if there are any unfinished sections, as many times there are in the outside wide frame, we take these and make up a super and give it to a strong colony, which usually finishes them from sweet clover, of which there is a fairly large growth in this locality. These last supers to be finished, are given to colonies that have *new comb* in the brood nest, as the honey may come in slowly, taking some time to finish it, and, with the new combs, there will be very little travel stain.

FINISHING UP THE LAST SECTIONS.

With the shallow brood chamber we can get our sections finished much better than with full-depth frames; and those colonies that have continued finishing supers late in the season will be either doubled, two together, or given an additional section of brood combs with honey for their winter stores.

The supers that are filled with honey are piled about ten high in the honey room, and from ten days to two weeks later the honey is fumigated to kill all wax moths, which is very quickly done by the following method: Place an empty super on top of each pile, and inside of this super set a saucer containing about 1½ ounces of bisulphide of carbon, and cover the upper super with a blanket or cloth, and allow the bisulphide to evaporate. I do this work at the close of the day so that I can lock up shop until the next morning, as the bisulphide is an explosive, and care should be taken that there is no blaze in the room. The next morning I uncover the supers, giving the honey room plenty of fresh air, and in two or three days all odor from the bisulphide will pass off, and, if the honey room is tight, as it should be, there will be no more danger from the wax moth.

A HIGH TEMPERATURE NEEDED IN CURING HONEY.

I store as much honey in the super as possible until ready to clean, grade and case it. The temperature of the honey room should be kept close to 90 degrees, Fahrenheit, for thirty days after the honey is in, and at no time should it go below 70 degrees. I never give any ventilation to the room with a high temperature.

Some fifteen years ago I had a honey house that was built fire-proof from the outside, covered with sheet iron, roof and all, with a cement floor. The room was shelved for honey on the north and west sides, with one window to the south and one to the east. These windows were kept open during the day, allowing the *heat to pass out*. They were five feet from the floor, so that the current of air was above and to one side of the honey. There were some ten thousand sections stacked one-half inch apart, and every section in that room absorbed enough moisture to force the honey through its cappings, and some of it was "weeping" good and hard, when discovered. I closed the windows and by the use of a stove kept the temperature at 110 degrees for three days, then dropping it to 90 degrees; and this temperature was kept for several weeks. Some of the sections that showed "runs" on the surface of the cappings had to be put back on the hives to be cleaned up. Comb honey needs a high temperature, with no ventilation, to cure it properly; the least it is exposed to the atmosphere the better, unless it could be in a direct current of air.

CORRECT GRADING OF GREAT IMPORTANCE.

The grading of comb honey is of much importance, not only to the producer, but to the middleman and retailer. A purchaser goes into a wholesale house and is shown samples and given

quotations on different grades of honey. He leaves his order, the honey is sent; and, in the course of time, he opens a case, and perhaps the first two or three boxes are all right, then he gets one that is so different that he at once makes a complaint to the house that he hasn't got what he bought; "come and get this and bring me something that is right." Perhaps there is not more than two or three sections that are off-grade, but what will the wholesaler do with it? One of two things; re-grade the lot, or sell it at a lower price. If the honey is in a commission house, it will be sold at a lower grade, in price, and the producer must stand it; and, not only has the producer lost, but every producer of comb honey loses by the influence it has on the market. I have bought crops of honey that had to be re-graded, and have found three grades in the same case. I know from experience that close, uniform grading of honey, year after year, has advanced the price and caused a demand for our honey, and it is usually contracted for before taken from the bees. If we bee keepers could unite upon a uniform package, grades and price per grade, we would take one long stride in advancing apiculture. The Ontario bee keeper's association of Canada has demonstrated what can be done along this line, and its members are reaping the benefits thereof.

CAMILLUS, N. Y., June 16, 1910.



Freeing Supers of Bees, Extracting and Outwitting Robbers Without Using Bee Escapes.

R. F. HOLTERMANN.

IN the discussion of this subject there is no doubt in my mind that neither Mr. Hutchinson nor myself have an axe to grind; neither is it a fault in either that we should earnestly con-

tend for that which we see. Progress in anything is made by the men and women who earnestly contend. True, they are the ones upon whom the blows often fall, but, what of that, the man or woman

who is truly sincere in that for which they contend have that within them to sustain something which can never be overshadowed by reverses or temporary defeat. Any right-thinking person will have more respect for an opponent who sees wrongly but believes he stands for principle, than for those who support him, thinking he is wrong, and who sell their integrity for friendship, policy or expediency.

In the extracting of honey, the methods pursued by me are mostly my own thought and planning; yet I have been very fortunate in my help, and we are always ready to give weight to an idea from the most inexperienced; and I believe this atmosphere has brought the best out of each in most instances. Necessity is the mother of invention, and again and again I have been placed in that position where I have been *compelled to invent* to overcome a difficulty; and, today, while, no doubt, there are those who have individual ideas which would be of great value to me, yet, rightly or wrongly, I have the strong conviction that I would not care to change my system for the system of very many.

THE INFLUENCE OF THE WEATHER IN AVOIDING TROUBLE FROM ROBBERS.

Where I can extract in a bee-tight place, I want, during robbing-time, when carrying out that work, to close the doors and windows so the air, laden with the aroma of sweet, cannot escape to excite the bees outside. A wire screen door to a bee house is a poor affair in robbing-time; it tends to keep the bees in the *very place*, where, as one goes in and out, they can at times gain access. During extracting I prefer to have the wind blow away from the apiary, not from the bee house to the apiary. When there is danger from robbing, the bees will give very much less trouble with a high wind than when the weather is calm. They do not follow the scent so well. Cloudy days are to be preferred to bright sunshine; and, of course, a day so cool that the bees are not readily induced to

fly is ideal, as far as the prevention of robbing is concerned; and, when other matters are rightly managed, is not bad weather for extracting.

Owing to the practice of migratory bee keeping, it has been impossible for me to always have bee-tight places in which to extract; and places where I, at one time, would not have attempted to extract in robbing time, are now tackled by me with at least a measure of confidence. I fully realize the great need of the utmost care, and in our extracting, especially that feature of it relating to robbing, I lay down for every helper an absolute rule which they know, and which I constantly watch, that it shall not be violated. In my experience with many bee keepers, few there are, unless having had long experience, who would, of *themselves*, be careful enough, and vigilant enough, and thoughtful enough, to conform to these *laws*; and when I say I am surprised that the Hutchinsons can be satisfied with the bee escape it is in view of the fact that, in my estimation, they are men who could carry to a successful issue, extracting without the bee-escape.

CIRCUMVENTING ROBBERS WHEN THE BUILDING IS NOT BEE-TIGHT.

Our method of procedure is to endeavor to get a bee-tight place to extract in, then we try to extract while there is still some honey coming in. Last year we took out, in six days, not *full* days, either, for it included twice moving, some 24,000 pounds of white honey. If we cannot obtain such a place, we will use a barn; even one quite open to bees. We have found, by accident, if there is an open space where the light comes in much more conspicuously than from other parts, that robber bees, no matter *where* they enter, will fly to that opening; and, if is covered with mosquito netting, fastened in the shape of a depression projecting *outward*, the bees will be trapped there, as they want to fly *out*, being drawn toward the light and re-

maining in the pocket by the same light. Next, I have a small boy, or other person, whose business it is, with a couple of paddles, to kill all bees that enter the barn to rob. This alone is worth a *lot*. Next, I have one or two smokers going, one, especially, at the entrance door. By this method there is enough smoke in the air, (and it does not take much) to prevent the *beginning* of robbing. There is *no let up* to this plan during the entire day. At the noon hour I nearly always stay behind while the rest eat their dinner, so the paddles for stray robber bees are always ready for use.

As to the apiary, I have never yet had to stop extracting on account of robbing. Everything is done, however, by taking advantage of everything we know—as far as circumstances will allow. We aim at not having (through carelessness, thoughtlessness, forgetfulness, or laziness) to learn the same lessons over and over again, and, of course, again pay for the learning.

EXTRACTING A SHORT DISTANCE FROM THE APIARY.

I first began extracting by carrying combs in comb buckets. This was followed by eight-frame supers; then 12-frame supers; next a wheelbarrow. By a rare streak of good fortune, owing to a mistake, the bees were put some distance from the place to extract, and we took a light spring wagon. That last plan has been good enough for us ever since. We put 6- 8- 10- and even 12-frame Langstroth supers on this wagon, the number being according to road, and the strength of the help. We have heavy cloths, made out of large, thick bags, to cover all supers with combs; and let me say, right here, that it is a very bad practice to have standing about the apiary, or in the wagon, uncovered, during robbing-time, supers freshly taken from the hives, even if there is no honey about them. The interior of the hive odor excites and attracts the bees.

I like for extracting, to have three to work outside, even if they have to help inside at times. If a man or a woman has to work alone in robbing-time, and there is much to do at one time, the operator is badly handicapped. The colony in hand is first smoked at the entrance, just a little, it is then smoked at the top. I shake the bees in front of the hive until I come to the last super to be taken off, when I shake them into the vacant space in that super. Unless the bees are of some special strains, which has a strong disposition to stick to the combs, I can, when the cells are capped, shake practically all the bees from the comb. But, if not, then a person stands on the other side of the hive, wielding in each hand a German bee brush. I hold the comb for him in such a way that he can, with one sweep, brush both sides of the comb. How can that be, it might have been asked, had I not given the key to the situation in the two brushes. I had a Mr. Fred Mehlenbacher, of Fisherville, Ont., help me for a few days in extracting. As he was a man who takes an interest in his work, and thinks, and sometimes has good ideas, he said to me, although he had never used a German bee brush before, "Now, if I only had two brushes, so I could brush *both* sides at once." In five minutes we had the second brush, and that saves a lot of time, and deprives the bees of chances to rob; and that is now our method.

I will guarantee that, after a good flow in a properly run apiary, I could take off 10,000 pounds of honey in a day, by the above method, and have the honey warm to extract; and not have to lift heavy supers, putting the bee escapes between, and replace the supers with the edges boiling more or less with bees, which are in danger of being crushed. I extract not one super at a time, but everything clear down to the brood chamber; and that is why I do not want to use the bee escape as I am situated, and as I judge the Hutchinsons are situated.

Of recent years, when there is much tendency to rob, or where I do not want, owing to the location, to excite the bees, we leave the wet combs in the extracting house or barn until the last thing at night. That means that I begin so late in the day that we can get them all on the hive before dark. In any case, unless honey is coming in very fast, it is a bad practice to bring wet combs into the apiary and keep them standing out until room is made for them by taking out combs of honey. Of course, when bees are not liable to rob, it is more expeditious to have the combs ready. To put combs, which have been extracted, on the last thing at night during robbing-time is a great factor in the prevention of robbing; by morning the combs have been made dry and they no longer excite.

It is my temperament to foresee danger and try and guard against it when I can.

That is what is needed in preventing robbing. Where we extract the second day, I am careful to clean up all I can at night and be on the ground in the morning before the bees get busy. Such well-known methods as exposing no honey on the wagon, cloth or supers are so well known, I need not enlarge on them.

Last summer I had with me a young man from Ohio, who was at the National Convention at Detroit. He came to learn how to produce extracted honey, and, having previous knowledge of bees, he picked up ideas rapidly, as he himself said. Before leaving, he stated that it had been his full intention to use bee escapes, but, after seeing with his own eyes our methods, he was thoroughly satisfied that our method without the bee-escape was better and quicker.

BRANTFORD, Canada, Jan. 21, 1910.



EDITORIAL

The National membership now mounts up to 3,850.

up members are entitled to receive "Legal Rights" free of charge. No copies for sale.

The National Convention is to be held in Albany, New York, October 1910.

Mr Oliver Foster in an article which will appear next month, calls attention to the advantages and disadvantages of different plans for preventing swarming. It is doubtful if there is any plan entirely free from objections; but, if bees were allowed to swarm in an unwatched apiary, the loss of swarms would be still more objectionable.

Nine Days is the age given by Mr. Lyon, in his book, as the age at which young queens take their wedding flight. According to my experience, six or seven days is more nearly correct. I have frequently had queens begin laying at nine days.

"Legal Rights," have been sent out to members of the National Bee Keepers' Association. If any member has not received a copy let him write to Manager France of Platteville, Wisconsin. Paid

E. B. Tyrrell, secretary of the Michigan bee keepers' association, recently sent out 100 letters to honey buyers, and he writes that replies are coming in by every mail. He already has requests for over 500,000 pounds of honey. This list of buyers, together with their wants

stated, will be mailed to every member in good standing, when the reports are sent out.



Lighting a smoker when planer shavings are used for fuel is a slow job, unless you know how to do it. You may think it is well to going, and yet, unless there is a little bed of live cinders in the bottom, it is almost sure to go out when set down. I have used kerosene oil to start the fire—squirt it on the shavings from a spring-bottom oil can, such as is used to oil machinery. This works very well, but it leaves an odor of kerosene about the fire for a while. Recently, I have been starting the fire by wadding up a piece of newspaper, lighting it, dropping it down in the smoker, then sprinkling on a few shavings, puffing the smoker, meanwhile. Sprinkle on a few at first, then, as these take fire, a few more, and so on until I have a good fire going. I like it the best of any plan I have yet tried. After a shavings fire is once well under way, there is no trouble from its going out.



The Importance of a Good Location.

I have seldom read a book in which I found so little to criticize as in "How to Keep Bees for Profit," by D. Everett Lyon; but there is one point in which I do not agree with the author, and it is one of considerable importance to the man who is going to make a business of bee keeping; viz., that of securing a location furnishing abundance of some specific source of nectar. In several places in the book there crops out the idea that bees may be kept with profit in almost any location. Here is a quotation:

Another popular fallacy is the idea that only those sections of the country are suitable where some specific, honey-producing blossom abounds in large numbers, such as alfalfa, sweet clover, basswood and buckwheat. While it is true that those bee keepers who are located in such favorable sections are

reasonably sure of a good crop of honey, in fact, of even obtaining record crops, yet the bees have such wonderful ability to adapt themselves to almost any locality, that it is astonishing how often they produce a goodly surplus for their owners when there are few evidences of large areas devoted to the cultivation of those plants of which they are most fond.

I will admit that bees sometimes store considerable surplus in locations that cause us to wonder where the nectar comes from, but this is not the rule; and the man thinking of engaging extensively in bee keeping should leave no stone unturned in finding the best possible location. To waste time and money in just ordinary locations, when there are rich harvests awaiting the coming of a claimant, is not good business. There are few locations in which bee keeping as a pastime or a side-issue may not be engaged in with satisfaction, but the cornerstone of successful specialty is the *pasture*.



Keeping Laying Queens on Hand.

It is possible to keep queens in cages, away from the bees, for two or three weeks. Cage them with a few workers and some candy for food, the same as when a queen is to be sent by mail, and they can be kept in some comfortable, quiet place much safer than when sent by mail; but such confinement certainly does the queen no good, although it is possible that it does her little harm. Queens may also be kept several weeks by simply caging them in cylindrical cages, and laying them on the tops of the frames of a populous colony of bees. I think a queenless colony might give them better care, but of this I am not sure. The best way, however, to keep queens is in nuclei. Of course, we then lose the use of the nuclei, but it is not necessary to have very large nuclei. I have used the ordinary $4\frac{1}{4} \times 4\frac{1}{4}$ sections for combs, having three in a nucleus, and eight nuclei in an ordinary super, by putting in partitions. It will be necessary to put a slip of queen excluding

metal over each entrance, or the bees will swarm out. They may swarm out just the same with the entrance guard, but the guard will prevent the queen from following the bees.



Make Your Writing Easy to Read.

The man who receives perhaps one letter a week, little realizes the strain that is put upon the eyes of the editor who sits at his desk from morning till night, day after day, the whole year through; often trying to decipher what seem to be hopeless hieroglyphics.

The kind of writing materials used has a decided bearing upon the legibility of the writing. What thin, "onion skin" paper was ever invented for, I don't know. It is hard to believe, but once in a while, somebody will write on *both sides* of such paper as this. I had such a letter today, and the paper was ruled, so that each line of writing was brought exactly opposite one on the back of the sheet. To make matters worse, the hand-writing was of a flowing style, the extended letters extended scarcely at all, in fact, some words were simply wavy lines. More than once was I tempted to chuck the whole thing in the waste basket.

Then there is the lead pencil. I feel towards that very much as I do towards the flimsy, transparent paper. So many will use a soft pencil on soft paper, then the continued rubbing together of the sheets of paper, under pressure, in the mail bags, leaves a lot of "smooches" in place of many of the words.

There are a few persons who write a large, sprawling hand, and put their writing upon paper that is not ruled very wide, and the result is that the extended letters cut into the words above and below. I have seen such writing that, when held off at a little distance, the page actually resembled a mass of circles and curliques. Such penmanship ought to be placed only upon alternate lines.

A bottle of good black ink can be bought for only five cents; half a dozen steel pens cost a similar sum; and a good quality of reasonably thick, white paper is not expensive; why then inflict such miserable scrawls upon your friends? So far as actual writing is concerned, almost anybody can write a legible hand if he will take pains enough in forming the letters. Make each letter so distinct that it could be instantly recognized even if it stood alone.



Samples of Wax Wanted.

The Bureau of Entomology is making a collection of samples of beeswax from all parts of the United States for the purpose of determining the comparative value of waxes produced by bees when gathering nectar from the various honey plants. It is well known that waxes from various parts of the country and from various honey sources vary greatly in color and in other ways, and it is hoped that such a study will offer some explanation of these facts.

For the purpose of carrying out this work, the co-operation of bee keepers in various localities is desired. To secure as reliable a sample of wax as possible, a colony of bees must be shaken from the combs to a hive or box *without foundation* and be allowed to build combs. After the box or hive body has been well filled with wax, the queen should be removed and the hive be put above the colony to allow the brood to emerge. At the end of 24 days the combs can be cut out, the honey removed by extracting or squeezing, and the wax, after washing, is to be sent to the Bureau of Entomology. It is not at all necessary that the combs be melted up. While it is usually impossible to find a honey flow strictly from one source, as far as possible all wax building should be during a single honey flow.

Any persons who are willing to co-operate in this work will confer a favor by writing me, stating during what honey

flow they are prepared to carry out this outline. A detailed statement of the methods to be followed will be sent, and, for the sake of uniformity it is urged that they be followed closely. As a small recognition of the work envolved, the name of the donor will be published with the description of the sample when the results are published.

Respectfully,

E. F. PHILLIPS,

In charge of Apiculture.

WASHINGTON, D. C.



Don't be Careless of Your Personal Appearance.

Perhaps this subject is out of place in a bee journal, but successful bee keeping will not tolerate slovenliness; and the man who is careless of his personal appearance is quite likely to be careless in other respects. In this connection it is well to remember that the mind and body act and react one upon the other. Taking a bath, putting on clean clothes, having a "clean shave," and otherwise "slicking up," will put a decidedly different tone into the mind. The man who goes to his work appropriately dressed, neat and clean, "well-groomed," as the saying goes, meets his fellows in a far different frame of mind than the man with a "slobbered" vest, unshaven chin, and long, tousled hair.

A man may neglect his personal appearance so long that he actually does not realize how "slouchy" he looks. In fact, I have seen men who, it seemed to me, took an actual pride in their slovenliness. They would sneer and pooh, pooh, at any attempts at sprucing up, as something beneath them; as something only for dandies.

I think that women are more careful than men in regard to their personal appearance, particularly if expecting visitors, or going out of their home—otherwise, not. I have seen every man, woman and child in a neighborhood rush to a fire without any preliminaries in the

way of a toilet, and some of the women didn't have much to brag of in the way of personal appearance—in fact, the men were really ahead of them in this respect.

There is an old saying about dressing according to the work to be done. Certainly. No sensible man would think of such a thing as putting on his best clothes to dig in a ditch, or to clean out a cistern, or put up a stove pipe; but, honestly, I have seen the driver of a coal wagon that was really more neatly dressed (for the work he had to do) and looked more tidy and wholesome, than some clerks behind a counter. The most neatly dressed man at his work that I remember to have seen was a bee keeper, dressed in white duck from top to toe. And this confirms the theory that the man who is particular in one respect is likely to be so in another, for this bee keeper was one of the most neat and exact of any that I ever knew. Of course, no sensible man would attempt to be dandified; to give his whole mind to his toilet as did the dude to the tying of his cravat, but there is a happy mean. There is not often any excuse for a man to wear something that would bring the blush of shame to the cheek of any respectable scarecrow. For instance, more than once have I seen some man wear an old hat soaked through and through and actually gummy with perspiration and dust, the rim hanging down all around like the eaves to some country railroad station, the only redeeming feature being the ventilation afforded by the holes in the top. I doubt if any man ever clung to such a head covering from motives of economy. He simply doesn't realize, or doesn't care, how he looks.

We owe it to our family and our friends to look just as well as we can. I suppose that I love my wife just as well if she isn't "fixed up" all of the time; at the same time I must confess that it affords me pleasure to see her well dressed, with her hair tastefully arranged. On the other hand, it often gives me a sort of

"scratchy, crawly" feeling to look at a man's face covered with a week's growth of beard. By the way, there are few things that add more to a man's personal appearance than the proper management of the beard. It may be made an ornament, or almost a deformity. Take my own face for an example. I can talk about that without hurting any one's feelings. As my friends know, it is built on the long, slim plan. It would be almost a caricature to put "a little bunch of whiskers on the chin." Side whiskers fill out the hollow cheeks and add roundness to the outline. The chin is prominent, while the upper lip is rather sunken. A mustache fills out the upper lip and

balances the protruding chin. Chin whiskers are all right for the man with a round face. With some men the growth of beard is so sparse and scraggly that there is only one thing to do—shave the whole face clean.

In conclusion let me say, dress according to your work; keep your clothing neatly brushed (and cleaned if necessary); keep your hair and beard trimmed, if you shave, do so often enough, if you can afford the time or the money, so that your face will always look clean; in short, make yourself look just as neat, and clean, and attractive, as you possibly can under the circumstances. Make it a pleasure for your friends to look at you.

Selected Articles.

AND EDITORIAL COMMENTS.

ABNORMALLY HIGH PRICES.

They are Suicidal, and Defeat the Very
Object they are Intended to
Accomplish.

The Review has taken up the subject of marketing, and intends to do all in its power to improve market conditions. Naturally, many of us think that pushing up prices to a high figure is the great desideratum. High prices are desirable, but there are other important considerations; besides, it is possible to force prices to such a point that they are suicidal—defeat the very object for which they were attempted. If prices reach that point where they seriously curtail consumption, there is loss instead of gain. There have been instances in which prices have been pushed to such a point as to practically kill the demand.

Printers' Ink recently contained a short article on the subject, written by Mr. Charles Corly, a New York commission man. Mr. Corly says:

It is a well known fact and has grown almost into an axiom that when certain articles of food reach a price which, in the eyes of the housekeeper, makes it a question as to the economy of purchasing such an article, that consumption is heavily curtailed; and that has been proven time and again during the past two decades in connection with almost every line of Pacific Coast products. Starting back in the boom year of 1890, when the crop of California fruits was short and the demand for the canned and cured products in excess of supply, prices reached a stage at which consumption virtually stopped, and the year 1891 found the jobbers of the United States with stocks on hand which had depreciated in value to the extent of hundreds of thousands of dollars; and it was several years subsequent to that time before these products regained normal conditions.

In the year 1903 a Coast price of \$1.30 a dozen was placed on red Alaska salmon, which led to the forcing of a price of 85c in 1905, imperatively demanded in order to clear the surplus stocks which had accumulated in the two years intervening, arising out of a disposition on the part of consumers to leave that grade of salmon alone.

Again, in the year 1907, a consumptive demand for Pacific coast cherries was checked and almost destroyed through the effects of abnormal prices which placed the goods virtually beyond the reach of the average housekeeper, and to this day cherries have not been reinstated in the estimation of the consuming public, and instances might be multiplied.

In many instances, consumers are already paying high enough prices for honey, but it is equally true that in many instances producers are not receiving enough for their product—there are too many go-betweens. I think that one part of the problem is to get the producer and consumer closer together. It is not possible, as a rule, to eliminate the middleman, but the closer that the producer can get to the consumer, the better prices will the former realize. As a rule, our honey (Hutchinson's) goes direct to the consumer, or to the bottler who sells to the consumer. At the most, there is only one go-between, and this explains why we are able to secure ten cents per pound for our white extracted honey put up in 60-pound cans.

BEE-POWER OR MAN-POWER?

An Old-Time Consideration of the Question of "Keeping More Bees."

Really new ideas in the bee business are decidedly scarce. It is only of late that very much attention has been given to spreading out and the running of outapiaries, but the idea is not new. In looking through some old journals recently, my eye was caught by the above title, and I proceeded to read. The article was written by Prof. J. Habbrouck, and published in the *American Apiculturist* in 1884—26 years ago. The ideas advanced are just as valuable now as then, and I think them worthy of reproduction. Here is what the Professor said:

There is an unmistakeable tendency among those largely engaged in the honey industry in this country, to divide into

two schools: the one, keeping comparatively few bees, and relying upon various forcing operations, involving a great deal of labor, to secure a large crop of honey; the other, by getting comparatively little from each of many stocks, letting the bees do the most of the labor,—try to get a larger aggregate yield. The one, in the language of Mr. Doolittle, says, "the greatest number of colonies kept should not be our ambition, but the greatest yield from a given number." The motto of the other class is, "the greatest amount of honey possible, at the least expense;" the one party is always fighting the "increase," viewing it only as so many hungry mouths to be filled with what they prefer to have in "the shape of surplus." The other believes that if a few bees are a good thing, more are better, and that, if it will pay to feed 50 stocks, it will pay to spread over more ground and feed 100, provided they are put to good use.

The honey business has been so advertised and "boomed," in various ways, that the supply has rather outrun the demand, and it is becoming to every honey producer to study to take his honey on just as small a margin as possible so each one should consider which of the above policies seems the wiser for him to adopt in his locality and circumstances. Mr. Doolittle has evidently been studying the subject, and he plainly indicates his convictions, in the article above quoted, when he asks, "Which is considered the better farmer, the man who employs certain help to work 200 acres of land to secure a certain yield therefrom, or the man who uses the same help on 100 acres and secures as large, if not a larger amount, than does the other from his 200 acres?"

Well, according to that supposition, the 100 acre farmer evidently has the best of it; but, I submit, friend Doolittle, you have put the most "brains" on the smaller farm, to make it yield as much as, or even more than, the one twice as large, contrary to the natural course of events. Now, admitting that an outlay in muscle pays better than an investment in soil, I still think, that to be fair, you ought to allow the man on the 200 acre farm at least one-half more income than the other. Now remembering that labor is a heavier expense than interest on capital, tell us, which is doing the better business? But suppose, the one, a stickler for the "most thorough cultivation," should employ his expensive labor in trenching his land with a spade, to get a larger crop per acre, as he certainly would; while the

other uses only cheap labor, but depends upon his own thorough knowledge of his business to manage them so as to get the full benefit of their muscle, and works with steam ploughs and all labor-saving contrivances; do you not see that the smaller farmer would be distanced immediately? Now, I believe that we should study to do less work ourselves, and let the bees do more—everything that they can do as well or even better than we—that we may be able to employ more of them to our greater profit.

What, then, are some of the things which we can with advantage turn over to the bees to do?

1. Hunting queens—especially in full stocks. Many of the systems of dividing and artificial swarming still given necessitate finding the queen, and I believe much time is yet wasted by bee keepers in hunting for queens for various other purposes. This is an operation in which the bees can beat us, and we are losing whenever we try to run opposition to them.

2. I do not believe we can successfully compete with them in arranging their brood in spring. I have practiced "spreading" their brood for them in the spring, and I have been "cautious" about it too, as the advocates of that operation advise, and while I can do it, I think, without damaging them specially, I find that a colony, sitting right by the side of the one I manage with superior wisdom, if allowed to have its way, if it is in good condition, and has plenty of honey, will come out at the clover harvest just as strong and prosperous as the other. So I have concluded that they are just as good authority on how much brood it is safe to start and where to put it, as I am; and I propose to let them run that part of my business hereafter. The queen is generally ready and waiting to lay just as many eggs as are safe, and the only thing that retards her is want of warm weather, and as that is a matter over which I have no control, I have concluded I can't help her.

3. They can manage the matter of swarming more cheaply, and, I am inclined to believe more judiciously, than the most expert bee keeper can do it, by any plan I yet know of. Where there are tall trees near the apiary, it is necessary to have all queens clipped, otherwise this labor may be avoided.

But some will say, the labor of opening hives and tearing down queen cells to prevent after-swarming would be about as much as artificial swarming; and that leads me to say:

4. Bees can tear down queen cells more cheaply than we. After-swarming can be prevented in every location in which I have had any experience, and I believe it can, anywhere, by introducing a young queen immediately after the first swarm issues. Any young queen will do—virgin or fertile; and the bee keeper should be sure to have them ready by the swarming time. Either kind can be smoked right in at the entrance, at that time, without danger or loss; and with the few bees then left in the hive they go right to work to destroy the queen cells without hinderance. In locations where it is necessary to clip queens, they should be fertile and clipped before introducing them to a full colony, as it would be too much work to find them for clipping afterward.

5. Bees are the cheapest help to lift honey from the lower story to the upper. I will admit that a large quantity of honey can be taken in side-boxes if it is raised to be capped; but not enough, I think, after long trial of that method, nor of good enough quality, to pay for the greatly increased trouble and labor of manipulation. In these things, and I am not sure but in some others, it appears to me almost self-evident, that we cannot afford to work against cheap Italian labor.

BOUND BROOK, N. J., Nov. 14, 1883.

Golden Italian Queens.

All cells built in strong queenright colonies. No disease has ever been known here. Tested queen, \$1.00; select tested, \$1.25; untested, 60 cts. each; one dozen, \$7.00. 6-10-21

D. T. Gaster, Rt. 2, Randleman, N. C.

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Queens from the well known SWARTHMORE. Apiaries of the late E. L. Pratt. The brightest *hustlers* and the most *gentle* pure strain of Golden in the United States.

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I am better prepared than ever to furnish promptly my famous strain of

Yellow Golden

I honestly think that they meet the requirements of business-bred queens. If your locality has any raw nectar that you would like converted into honey, let me say that these bees never stop until the last drop is safely stored away.

Prices are as follows: One untested queen, 75 cts.; three for \$2.00; ten for \$6.00. Tested queens, \$1.00 each; extra large, yellow and prolific, \$2.50 each. 6-10-21

W. S. McKNIGHT, Elamville, Ala.

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My patent section machine at half price. A new queen nursery and queen rearing outfit. Queens from imported Italian, Caucasian and Carniolan stock; also Adel queens. Send for catalog and price list.

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4-08-tf

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Until further notice, \$4.00 per 1000 for No. 1. Best Dovetailed Hives, with Colorado covers, 8-frame, \$1.35 each; 10-frame, \$1.45 each. All other supplies as cheap. Berry baskets and crates kept in stock. Catalogue free. Address the Bee Supply Man of Central Michigan. 2-10-tf

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Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 90 cents; tested \$1.10; select tested, \$1.45; breeder, \$2.20. One-comb nucleus, 95 cts. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation. 5-10-11

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Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, \$1.00 each; six \$5.00; dozen, \$9.00. Tested, \$1.25; six, \$6.50; dozen, \$12.00. Three-frame nucleus, without queen, \$3.25; add price of queen wanted. Don't take chances. Get the real thing. Send for circular.

J. E. HAND

Birmingham, Erie Co., Ohio.

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

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60-lb. empty tins, two to a case, used but once, as good as new.

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Produce workers that fill the supers, and are not inclined to swarm. They have won a world-wide reputation for honey gathering, hardiness, gentleness, etc.

Mr. W. Z. Hutchinson, editor of the Bee Keepers' Review, Flint, Mich., says: "As workers, I have never seen them equalled. They seem possessed of a steady, quiet determination that enables them to lay up surplus ahead of others. Easier bees to handle I have never seen."

My queens are all bred from best long-tongued, three-banded, red-clover stock (no other race bred in my apiaries) and the cells are built in strong colonies, well supplied with young bees.

Prices: Untested queens, \$1.00 each; six, \$5.00; dozen, \$9.00. Select untested, \$1.25 each; six, \$6.00; dozen, \$11.00. Select tested, \$2.00. Extra select tested, \$3.00. Breeders, \$10.00.

Safe arrival and satisfaction guaranteed. Descriptive circular free. Address

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PAPER CUTTER FOR SALE

The Review printing office, and another office in town, have joined forces, and, as a result there is a nearly new, Peerless Gem, 25-inch, paper cutter for sale.

The frame is strong and heavy and well-braced, the knife thick and deep, yet it is the easiest working cutter that I ever used. The lever is adjustable, returning from the cut with the least possible exertion, owing to the perfect balance; there are side gauges and front and back enameled measuring gauges.

We paid \$105 spot cash for it only a few months ago, it has always been used carefully, and could scarcely be distinguished from a new machine; in fact, is really worth just as much as a new cutter, yet we would be glad to sell it for only \$80.

W. Z. HUTCHINSON, Flint, Mich.

We will pay 30c a pound, delivered
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BEE SWAX

Until further notice. Alfalfa honey, new cans and cases, fancy light, 8c a pound, fancy amber, 7c a pound, f. o. b. New York, in not less than five case lots. Will shade prices on larger quantities. Shall be glad to send samples.

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Golden Three-banded Italian Clover Queens and Grey Carniolans

Queens bred from Imported Stock

	One	Six	Twelve
Untested	\$.75	\$ 4.00	\$ 7.50
Selected	1.00	5.00	9.00
Tested	1.25	6.00	12.00
Selected	1.50	8.00	15.00

Choice Breeders, \$3.00 to \$5.00.

Choice Italian Queen, mated in my Carniolan apiary, first cross

Price	One	Twelve	Twenty five, or more
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First Cross: We have tested these bees and find them to be real hustlers. We have also had many calls for this very desirable bee, so have decided to offer them to the bee keepers at a low price. Carniolans have many good points to recommend them to the bee keeper, more especially this first cross. The drones are large and very strong flyers, which strength and vigor they impart to their offspring. These bees cap their honey very white, which the majority of Italians do not. They resist diseases very much more than other bees, are gentle, quiet and easy to handle.

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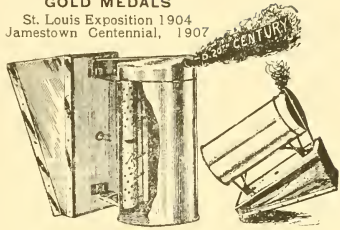
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Select untested queens \$1.00 each, five for \$4.00. Imported breeding queens, \$5.00 to \$6.00. Send to original importer who has spent 13 years in foreign countries investigating these and other races of bees.

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GOLD MEDALS

St. Louis Exposition 1904
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Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is in one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Price \$1.00; two \$1.60; by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2.00.

We sell Danzenbaker hives and supers with metal **propolis shields**, and anything in **bee supplies at factory prices**.

Send your address and B—friends, for catalogs.

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Postpaid, All Cotton, 50c; Silk Face, 60c; All Silk, 90c.

Made of Imported French Tulle Veiling; cord arrangement which permits wearer to handle bees in shirt-sleeves with no chance of bees crawling up and under veil. With a hat of fair size brim to carry veil away from face you are as secure from stings, movements as free and unrestricted, and as cool and comfortable as you would be at a summer resort.

Please send me two more bee-veils. I have tried all kinds, and yours are best of all.—N. E. France, Platteville, Wisconsin.

Editorial Comment in Bee Keepers' Review: The Advanced Bee-veil is something that I have worn with great comfort the past few weeks. The peculiar feature of the veil is, the edges are held down firmly on the shoulders away from the neck. This does away with all chance of stings and the hot, suffocating, uncomfortable feeling found in other veils that are tucked in close about the neck.—W. Z. Hutchinson.



A. G. WOODMAN CO., Grand Rapids, Michigan

Glass Jars Cheap

Last year we got an order from a jobbing firm to furnish a large shipment of honey put up in square glass jars—one pound and dime sizes. After the bottles had been ordered and made, and were just ready to ship, from Pittsburg, Penn., the order was countermanded. This left us with the jars on hand, and, unless we put forth an extra effort to sell them, it looks as though they would remain unsold for a long time.

The jars are of white, flint glass, plain; that is, have no lettering. They can be used with either corks or paper discs. The latter are much cheaper and really more desirable than corks.

The small size holds five ounces of honey, and is known to the trade as the "dime" jar. The regular retail price, with corks, is \$3.25 per gross, but we will furnish it, with corks, at \$2.75 per gross; or, with paper discs, at \$2.50 per gross.

The other size is the one pound jar, and, with corks, the regular price is \$5.75 per gross, but we will sell it, with corks, at \$4.50 per gross, or, with paper discs, at \$4.00.

Goods will be shipped direct from Pittsburg, Penn. Address

Snyder Bee and Honey Co.

Kingston, N. Y.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms, white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON We quote as follows: Fancy white comb honey, 16 to 17c; No. 1 white, 15 to 16c; fancy white extracted, 9 to 10c; light amber, 7 to 5c; beeswax, 32c.

BLAKE, LEE CO.
4 Chatham Row,
Boston, Mass.

Mar. 10, 1910.

KANSAS CITY—Our market is entirely bare of comb honey, consequently no quotations to make. White extracted, 6½ to 7c; beeswax, 25 to 28c.

C. C. CLEMONS & CO.
Kansas City Mo.

April 15, 1910

CHICAGO—Trade is meager in comb and only fair in extracted. We quote as follows: Fancy, white, 18c. No. 1 white, 15 to 16c; fancy amber 11 to 12c; No. 1 amber 9 to 10c; fancy dark, 9c. No. 1 dark, 8c; white extracted, 7 to 8c; amber, 6½ to 7c; dark, 6c; beeswax, 32c.

R. A. BURNETT & CO.
199 S. Water St.

April 15, 1910

TOLEDO—The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.
Feb. 19, 1910. Toledo, Ohio

CINCINNATI—We quote the very finest fancy water white table honey at 9½c per pound f. o. b. Cincinnati. White honey, the kind other people call their fancy, at 8c., packed in 60-pound cans, 2 cans to the crate. Amber honey in barrels from 6c to 7½c, according to the quality and quantity bought. Just now we are paying 29c spot cash, delivered here, for nice, bright yellow beeswax; or 31c in trade.

THE FRED W. MUTH CO.
51 Walnut St., Cincinnati, C.

June 23, 1910.

DENVER—Market entirely bare of strictly No. 1 white comb honey and for a limited quantity of such we could secure a good figure. Demand for extracted honey is dropping off, but, owing to poor crop prospects, prices are well-maintained. We quote light amber at 7½ to 8½c, and strictly white at 8½ to 9c per pound. We pay 25c per pound for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASS'N.
F. Rauchfuss, Mgr.
June 18, 1910 Denver, Colo.

N. W. YORK CITY—There is practically no trade in comb honey at this time. Stocks are fairly well cleaned up, and we do not expect that very much will be carried over. There is some little demand at the following prices: Fancy and No. 1 white, 14 to 15c; No. 2 white, 12 to 13c; dark, 9 to 10c. Extracted in fair demand, with sufficient supply from all over. We quote: California white, 8 to 9c; light amber, 7 to 7½c; alfalfa, light, 7 to 7½c. Southern in barrels from 60 to 75c a gallon, according to quality. Beeswax steady at 30c.

HILDRETH & SEGE KEN
April 16, 1910 265 Greenwich St.

WANTED—150 colonies of bees.
3-10-11 **H. L. SOPER**
112 Thompson Ave., Jackson, Mich.



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

DO YOU CARE

Where you buy your Queens? You certainly do. Send a postal for prices of the two best strains of their kind on this Continent, Italian and Caucasian.
A. D. D. WOOD, Box 61, Lansing, Mich.
5-10-11

We are Headquarters for

ALBINO BEES

The Best in the world. If you are looking for the bees that gather the most honey, and are the gentlest of all bees to handle, buy the Albino. I can furnish the Italian, but orders stand fifty to one in favor of the Albino. I manufacture and furnish supplies generally. Circulars free. Address

S. VALENTINE

Rocky Ridge, Frederick Co., Md.

4-10-31

Golden and Red Clover Italian Queen Bees

Our Golden and Red as good as they are beautiful. Our long-tongued red clover stock is as good as the best. Queens sent by return mail in the season. Select, untested queens, \$1.00 each; three for \$2.75; six for \$5.00; one dozen, \$9.50; tested, \$1.50; select tested, \$2.00. Let me send you my descriptive circular of queens, nuclei, bees by the pound, etc.

VIRGIL SIREs, North Yakima, Wash.
5-10-31

Save Queenless Colonies.

Introduce vigorous, tested queens. We can supply such queens by return mail, at \$1.00 each. These are healthy, prolific, Italian queens, reared last fall, and wintered in four-frame nuclei. There are none better. Prompt attention given to all orders, and satisfaction guaranteed. Send for price list.

J. W. K. SHAW & CO., Loreauville, La.
4-10-11

Root Automatic Extractors



- No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$23.00
- No. 27—Four-frame Root Automatic for frames not over 11 $\frac{3}{8}$ in. deep, 34 in. in diameter (weight 210 lbs.) 27.00
- No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00
- No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00
- GASOLINE ENGINE with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

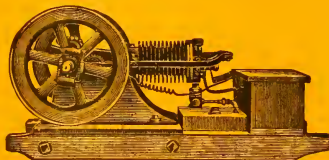
the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



The A. I. Root Company, Medina, Ohio

AUGUST, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 249.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Aug. 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Clubbing List

I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1 75
American Bee Journal, (new)....	(1.00).....	1.75
Canadian Bee Journal.....	(1.00).....	1.75
Ohio Farmer.....	(1.00).....	1.75
Farm Journal (Phila).....	(.50).....	1.25
Rural New Yorker.....	(1.00).....	1.85
The Century.....	(4.00).....	4.50
Michigan Farmer.....	(1.00).....	1.65
Prairie Farmer.....	(1.00).....	1.75
American Agriculturist.....	(1.00).....	1.75
Courty Gentleman.....	(2.50).....	3.15
Harper's Magazine.....	(4.00).....	4.10
Harper's Weekly.....	(4.00).....	4.20
Youths' Companion.....(new)....	(1.75).....	2.35
Cosmopolitan.....	(1.00).....	1.90
Success.....	(1.00).....	1.75

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of members.

To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

President.

W. D. WRIGHT, Altamont, N. Y.

Vice-President.

LOUIS SCHOLL, New Braunfels, Texas.

Secretary.

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R. A. HOLEKAMP, St. Louis, Mo.

R. A. MORGAN, Vermillion, So. Dak.

J. E. CRANE, Middlebury, Vt.

E. F. ATWATER, Meredian, Idaho

Annual Membership \$1.00.

Send dues to Treasurer.

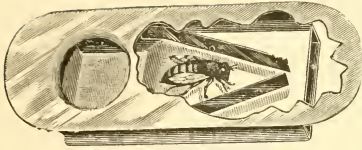
Names of Bee-Keepers

TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand all arranged alphabetically (in the largest States), and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky..... 182	N. C..... 69
Ark..... 82	Kans..... 350	New Mex. 54
Ala..... 80	La..... 38	Oregon... 106
Calif... 378	Mo..... 500	Ohio.... 130c
Colo... 228	Minn... 334	Penn.... 916
Canada 1200	Mich... 1770	R. I..... 46
Conn... 162	Mass... 275	S. C..... 40
Dak.... 25	Md..... 94	Tenn.... 172
Del.... 18	Maine 270	Tex..... 270
Fla.... 100	Miss... 70	Utah..... 68
Ga..... 90	N. Y.... 1700	Va..... 205
Ind.... 744	Neb.... 345	Va..... 182
Ills.... 1375	N. J.... 130	W. Va... 178
Iowa... 800	N. H.... 158	Wash... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich.



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

Only 25c Per Case.

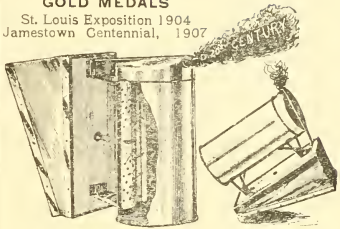
60-lb. empty tins, two to a case, used but once, as good as new.

C. H. W. WEBER & CO., Cincinnati, Ohio

6-10-1f

GOLD MEDALS

St. Louis Exposition 1904
Jamestown Centennial, 1907



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-ported** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is in one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Price \$1.00; two \$1.60; by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2 00.

We sell Danzenbaker hives and supers with metal **propolis shields**, and anything in **bee supplies at factory prices**.

Send your address and B—friends, for catalogs.

F. DANZENBAKER, Norfolk, Va.

6-10-1f

Advanced Bee-Veil

Postpaid, All Cotton, 50c; Silk Face. 60c; All Silk, 90c.

Made of Imported French Tulle Veiling; cord arrangement which permits wearer to handle bees in shirt-sleeves with no chance of bees crawling up and under veil. With a hat of fair size brim to carry veil away from face you are as secure from stings, movements as free and unrestricted, and as cool and comfortable as you would be at a summer resort.

Please send me two more bee-veils. I have tried all kinds, and yours are best of all.—N. E. France, Platteville, Wisconsin.

Editorial Comment in Bee Keepers' Review: The Advanced Bee-veil is something that I have worn with great comfort the past few weeks. The peculiar feature of the veil is, the edges are held down firmly on the shoulders away from the neck. This does away with all chance of stings and the hot, suffocating, uncomfortable feeling found in other veils that are tucked in close about the neck.—W. Z. Hutchinson.



A. G. WOODMAN CO., Grand Rapids, Michigan

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; **DIRECT, QUICK and LOW RATES.**

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.

Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the **VANDEUSEN WIRED.**

Send for circular, price list, and samples of foundation.

J. Van Deusen,

Canajoharie, N. Y.

QUICK DELIVERIES The month of May is an important one in the bee keeper's calendar. You must get your supplies now if you expect to make the most of the bountiful harvest before us. My facilities are unequaled for supplying goods promptly.

SECTIONS I handle the best grade of sections made. If you want a hundred or ten thousand or a hundred thousand, I can fill orders promptly with goods which are bound to please. You may judge of the popularity of the sections I sell when I tell you that the manufacturers made upward of twenty-five million of them last season.

FOUNDATION There is nothing more important to the up-to-date bee keeper than to have foundation just when he needs it, and of the best quality, I sell nothing but Weed-process Foundation, the recognized standard of the world. The bees appreciate the good points of this foundation, and every bee keeper knows that it is the best. All grades and sizes constantly on hand. A pound or a ton, just as you like.

C. H. W. WEBER & CO.

2146 Central Avenue Cincinnati, Ohio.

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of **BEE-KEEPER'S SUPPLIES.**

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.

Jamestown, N. Y.

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

Hand's HANDSOME HUSTLERS

Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, 75c each; dozen, \$8.00. Tested, \$1.00; dozen, \$9.00. Three-frame nucleus without queen, \$3.00; $\frac{1}{2}$ -pound packages of bees, \$1.00; add price of queen wanted, etc. Send for circular.

J. E. HAND

Birmingham, Erie Co., Ohio.

DO YOU CARE

Where you buy your Queens? You certainly do. Send a postal for prices of the two best strains of their kind on this Continent, Italian and Caucasian.

A. D. D. WOOD, Box 61, Lansing, Mich.
5-10-1f

Wanted Clover or raspberry extracted honey in 60 lb. cans. Mail us average sample and give us prices. 8-10-2t
ALBERT G. HANN, Pittstown, New Jersey.

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-1f

Mott's Strain of Italians

By return mail. Untested, 65c; 6, \$3.80; 12, \$7.50. Natural Golden from Imported Stock, selected, \$1.00 each. Send for descriptive list. Leaflets, safe plans of introduction of Queens, 15c each. Leaflet plans of increase, 15c each, or copy of both for 25c. 7-10-1f

E. E. MOTT, Glenwood, Mich.



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

Comb and Extracted Honey

Write us when you have any to offer, naming your lowest price freight paid to Cincinnati. We buy every time your price justifies, and, we remit the very day the shipment arrives.

The Fred W. Muth Co.

The Busy Bee Men

51 Walnut St.

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We will pay 30c a pound, delivered New York for choice quality pure

BEE SWAX

Until further notice. Alfalfa honey, new cans and cases, fancy light, 8c a pound, fancy amber, 7c a pound, f. o. b. New York, in not less than five case lots. Will shade prices on larger quantities. Shall be glad to send samples.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

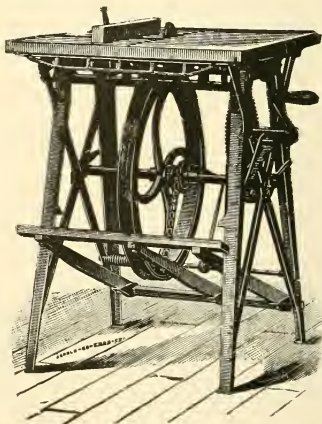
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

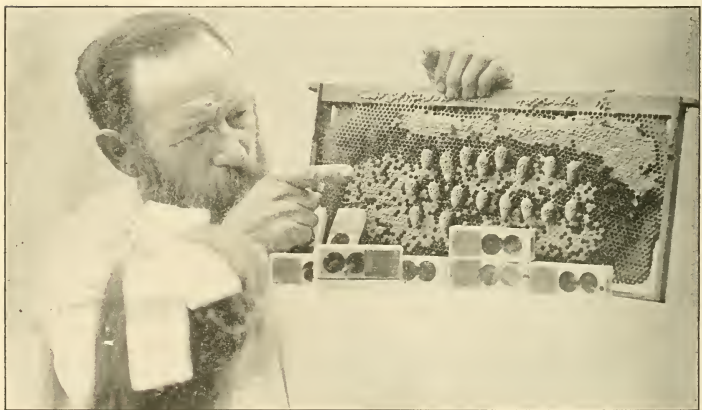
W. F. & Jno. Barnes Co.

351 Ruby Street
Rockford, - Illinois





Placing Larvae in the Cell-Cups Stuck on a Comb of Brood.



Ripe Cells for Ready Removal.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, AUGUST 1, 1910.

NO. 8

Grafting Artificial Cell Cups Without the Use of Royal Jelly.

T. S. HALL.

I am sending you a photograph showing the grafting of queen cell cups on a comb without using any royal jelly. These cell cups are handled only twice from preparing for grafting until they are ready to give to nuclei; or go into the queen nursery.

This is the easiest and shortest method of getting cells built that I know of, and results in the best queens.

We dip the cell cups out of beeswax, stick them on the comb as you see, and then place the frame in a queenless three-frame nucleus two hours for the bees to warm them up and polish them out; then we take out the frame with the cups on it and proceed to graft them as shown in the photograph. This grafting is done in the afternoon, and the frame is returned to the three-frame nucleus, and the frame of cell cups thus grafted

allowed to remain until the next morning, when the cell cups are removed from the nucleus and comb, stuck to a frame of unsealed larvae, and placed in the cell-building hive to be fed and capped over.

The ninth or tenth day they are distributed to nuclei that have been queenless for two or three days.

Some times we leave the cells on the comb until the 12th day and place it in a queenless colony for the cells to hatch, and just drop the young queens in the nuclei as they hatch. This can be done in a few hours after the queen has been removed. In our queen rearing yards we use eight-frame Langstroth hives with a division board in the center, thus forming twin, three-frame nuclei in each hive.

JASPER, Ga., Oct. 12, 1909.

Some Methods of Controlling Increase When Producing Comb Honey.

OLIVER FOSTER.



AS a rule, the bees that become so engrossed in trying to get their up stairs in proper shape that they never think of swarming until it is too late, are the bees that, incidentally, turn in the most

profit to their owner. For this reason, it is not usually wise to intrude any swarm-control maneuvers until there appears an occasion for it.

A mild form of swarming impulse may be thwarted to advantage by simply removing the queen cells and one or more heavy combs, and inserting empty comb or foundation in the center of the brood nest.

If at the next round such mild means have not proven effective, more drastic measures must be resorted to.

SWARM-CONTROL METHODS CLASSIFIED.

The conditions that induce swarming are, many bees of all ages, much brood in all stages, and crowded quarters.

There are three general principles employed in preventing threatened swarming:

The first separates the working forces of old bees, which are the swarm "agitators," from their queen and their queen cells, but not from most of their brood.

The second separates them from their queen cells and most of their brood but not from their queen.

The third simply introduces empty space within the brood nest. There are

a multitude of ways of applying these principles and their combinations.

DEQUEENING THE WORKING FORCES.

This, of course, positively prevents swarming until the bees can rear new queens. By destroying the new cells again, all except one, after 10 days, or by removing all of them and giving a queen, we may prevent the issuing of a swarm, because that would leave the parent colony hopelessly queenless; but what are the other results of dequeening the working forces? It stops, or curtails, the rearing of future workers. Work in the sections is at once checked; partly because the cells from which brood is rapidly hatching are all left vacant, and practically no new comb will be built above while there are empty cells below. The ultimate loss from this may not be great, since when a vigorous queen is again restored to these combs much of this new honey they contain will usually be removed to the sections to make room for eggs, especially if the flow is still on, in which case, however, this sudden demand for more comb may overtax the comb builders. But this temporary diversion of the honey from the sections to the brood nest is, perhaps, the least objection to dequeening the field workers.

TESTING THE EFFECT OF DEQUEENING, BY THE SCALES.

According to the testimony of my good friend, Herman Rauchfuss, a normal colony on the scales, if deprived of its queen, will suddenly show a marked drop in its daily intake of stores, while queenright colonies in the same yard maintain a regular daily gain. Here is a field for interesting and needed investiga-

tion. We should be able to demonstrate just how much honey, if any, we lose directly, by dequeening the field workers for 10 days during a flow.

Over against the above testimony we have what is known as the Sibbald system, involving dequeening, and the extensive and successful practice of such authorities as R. C. Aikin and Dr. Miller.

REMOVING MOST OF THE BROOD AND HONEY,
AND LEAVING THE WORKERS
QUEENRIGHT.

This puts the two parts of the divided colony in almost the conditions that prevail after natural swarming, and usually seems to satisfy the demands of the swarming impulse. The supers, the old field workers, the queen and a little of the brood, are left on the old stand, and the honey crop is expected from there. The old hive with most of the brood and some young bees is either removed to a distance, as in shook swarming, or it is placed in close proximity to the queenright, with some sort of restricted communication between the two that prevents or discourages the bees from returning to their brood after once leaving it; or the relative position of the two hives is changed from time to time, the object being to throw the young workers, as they develop and start out as fielders, into the queenright colony.

The restricted passage plans have the advantage that the heavy hive need not be carried far away—some bees will discover and follow their brood a long ways off. Then again, if the brood is carried away, once for all, the young brood is likely to suffer for a few days for lack of nurse bees and workers; and, after that, there is an increasing horde of workers maturing that might better be at the working station. The other plan should turn them over as they can be spared. The brood hive may be placed on either one of the six sides of the queenright colony, excepting in front of it. If there are hive covers enough, I prefer to place

the brood at the rear, with communication between the bee spaces of the bottom boards or floors of the two parts. This arrangement permits of easy examination of either part at will; does not interfere with supering, and the workers from the rear must pass under the entire queenright colony before they can return to the rear.

DO NOT DEPRIVE THE BROOD OF ITS
PROPER CARE.

It seems necessary that a few of the working bees should return to their brood at first, while a part of it is open. They seem to need water back there or something—or both. I have found many dead bees on the bottom of a hive so arranged with ample ventilation, but no exit save a Porter bee escape between the two parts, which was not clogged. Then, again, I have fancied that I noticed indications of dissatisfaction on the part of the bees which seemed to arise from the consciousness that their babies were just beyond a too closely restricted passageway for their proper care. We know very little about the practical effects of "prevailing sentiments" in a bee hive. And now here comes "Swarthmore" with a startling discovery. He says: "Right here I should like to make an important statement which all should bear in mind when rearing queens. It is this: It matters little, so far as the loss of brood is concerned, what you may do with a queen when you separate her from her brood. The loss in egg laying, the death to open brood, and the removal of fresh laid eggs will occur to the same extent, whether a queen is placed below a zinc honey board, caged in the hive, or placed into one's coat pocket; the bees feel they are queenless and thousands upon thousands of future bees are lost to the colony in the removal of young brood and eggs by the bees. Never remove a queen, therefore, unless absolutely obliged to do so."

SIMPLIFIED QUEEN REARING.

Bees at Swarthmore seem to act very differently from those at this altitude. If Mr. Pratt had said, "No matter whether you leave the queen with the brood or not, if there are not sufficient bees to care for it, thousands of eggs and larvae may be removed," his warning would apply here. I am inclined to suspect that it is not *dequeening the bees* that causes such wholesale loss of brood at Swarthmore, but, rather, what we might call *de-beeing the brood*—see the moral?

I have never noticed any loss of eggs or larvae that could be traced to the want of a *queen*, but a cell-building colony, having only a few select larvae, will sometimes "use up" all of the larvae they accept, probably as material for royal jelly.

Speaking of queen rearing, never have your future bee mothers developed in a hive that has been, or that is being, drained of its field workers, nor in a colony that has more open brood than bees to properly care for it. To avoid ever having any such colonies, if shaking is practiced, leave plenty of bees with the brood, or better, shake all off and place brood over a weak colony over zinc. This will soon make another good "shake."

If you use one of the trapping devices to drain the bees away from the brood, arrange the "trap" so that some of the bees will return to their brood.

Aim to have plenty of choice ripe cells or young queens on hand, and wherever there is a suitable opportunity to do so, work one in in place of an old queen.

WHITER SECTIONS FINISHED OVER NEW
BROOD COMBS.

In most swarm circumventions, Doolittle's excepted, the old bees of the new "swarm" are allowed to build new combs in the brood chamber as well as in the sections. This helps to satisfy their desire for a new home.

Starters only, in the brood frames, are preferable to full sheets of foundation;

but, to avoid unnecessary and expensive secretion of wax for a full set of brood combs, and, in order to head off the production of drone comb before it begins, after there are from three to five new combs about finished, and when swarming is now given up, the least used starters may be replaced with full sheets of foundation or with drawn combs. The latter are best added one or two at a time between the brood.

Comb honey is finished whiter over new brood combs than over old ones, but if the empty supers are added below the partly filled ones, thus causing the sections to be finished farther above the brood, dark combs below will have less effect.

Towards the close of the honey flow, some add the last super or two on top of the others. At this time the conditions are different. The brood in the upper part of the brood combs is now being replaced with sealed honey for winter stores. The tendency now is to store and finish the honey nearest the brood. The bottom super is now separated from the brood by sealed honey. It will not be capped as white as the early honey, but it will be finished up here better than elsewhere. The last added super would often better be added underneath the brood chamber with no sections in it.

The growing prevalence of foul brood throughout the country, and the modern improved methods of rendering combs into wax, and of turning wax into foundation and foundation into new combs, are making it less and less an object to save and use old dark brood combs.

BOULDER, Colo., Mar. 13, 1909.

[Mr. Foster's article ought to have appeared last month in order to have been timely. It was in type, but I was sick, and the "making up" of the Review had to be entrusted to other hands, and this article was left out for lack of room. Perhaps I could have done no better had I been on deck—there is always more matter on hand than can go in.—EDITOR.]

Points to be Considered in Breeding. Longevity Of Much Importance.

F. DUNDAS TODD.

IT may seem rather absurd for one who has raised only a few queens to say anything on such an important subject, but, nevertheless, I have read much on the problem and thought carefully over all the data I have gathered together, trying to get hold of some definite, basic principle that would be all-inclusive. Recently, I have had the experience of being associated a good deal with a poultry expert, and in the course of his lectures, he deals with problems similar to those that interest bee keepers. Some breed poultry for points, some for flesh, others for egg production. The latter quality is the one commercially desirable in this part of the world; so my friend is always urging the farmers to secure a good egg laying strain; always insisting that the *strain* is more important than the breed. He also warns his hearers that the most prolific egg layer may not *necessarily* be the mother of hens like herself. He seems to place more faith in selecting breeding stock by shape rather than by egg production. The opinion I formed was that, in many respects, the breeding of poultry is just as nebulous as is that of bee breeding. There is the want of an all-inclusive principle.

Some apiarists breed from the best queen by honey production; others from the queen whose *daughters* show the best results; and this looks as if the latter condition should cover almost everything, but, in my short experience, I have found, not infrequently, that the colony giving the greatest honey returns in one year had a great struggle to exist the following spring.

Another writer in your own paper says he finds it all right to breed from a queen whose brood is uniformly laid and evenly capped, indicating that she and her progeny are methodical—have good busi-

ness habits. I have had no chance to experiment along this line, so can say nothing as to facts, but, on general principles, I can not see anything conclusive. I can not controvert; will not even turn cold water on the idea, because the scientific world has long ago learned that no fact is too trivial for observation; as the secret of a great principle may be solved from the knowledge of a very small fact.

As my colonies increase in numbers, my records are becoming more interesting; and, let me say, more voluminous, as regards the individual colonies. Then, as a new idea strikes me, I sit down with the hive book and a few sheets of clean paper, and spend many a pleasant evening hour working out percentages from the data recorded. The results are more than interesting; they are fascinating.

THE DEATH-RATE IN WINTER IS A POINTER

In the middle of February, I changed bottom boards to give the bees clean, sanitary conditions, and was much impressed with the difference in the quantity of dead bees on the floor. I jotted down the condition roughly, under the headings of "many" and "few" dead. Now, at the end of May, I have just gone over my book to compare results, and I find that out of those with "few" dead in February, 63 per cent. are strong; 9 per cent. are fair; 28 per cent. tried to supersede the queens, while none are dead. On the other hand, of those with "many" dead in February, 17 per cent. are strong today; 17 per cent. fair; 33 per cent. tried to supersede and 33 per cent. are dead. Broadly speaking, 75 per cent. of those with few dead in February are now in shape for the honey flow, while only 34 per cent. of those that had many dead, are now ready for business. The wintering conditions were as uniform as I could make them.

The very strongest colony had no stores at all in the middle of March, so I gave it about a pint of syrup. I had to leave town for several weeks, so it, and many others, had to get along as best they could, but it went booming ahead all the same, turning all nectar from dandelions into brood as fast as it came in. On the other hand, some colonies that were weak in bees, but having an abundance of stores, strengthened very slowly. The conclusion is, therefore, that *plenty of bees in spring* is the most important factor for the building up of a colony for the honey flow.

As I studied over the data, the idea was developed in my mind that, perhaps, the most important factor to be considered in a strain of bees is that of physical vigor, in a word *longevity*, sufficient stamina to keep them alive during

the period of repose in winter and until they have brought their successors on the stage in April and May. Just as I had arrived at this conclusion, had decided from what queen I was to raise new stock, from what hives I was to permit drones to fly, there appeared in *Gleanings* a very interesting article by Mr. Simmins, of England, insisting strongly that the most important factor about bees is *longevity*, and that if we secure this in our strain we will get a big honey production as a natural consequence.

This summer, therefore, I am going to raise my new queens from the colony that showed the fewest dead on the bottom board, and permit drones to fly from the hives that approached the nearest to the best.

VICTORIA, B. C., May 27, 1910.



Sorting, Grading, Packing and Preparing Honey for the Market.

MATHILDE CANDLER.



AFTER the comb honey supers are taken from the hives at the close of the main honey flow, there comes a let-up in bee work which is very much appreciated after having

worked every day for a good many weeks, Sundays included, often from daylight to dark when the work required it. Now I take a vacation for a week or two and do "such labors of love" and other work as have been neglected during the honey season.

But the comb honey producer can not be idle long, for now comes the task of

getting all those sections ready for market. As the weather is very warm, I devote this time to nailing and getting shipping cases ready, looking over and fixing up carriers, fumigating honey, and doing such other work, preparatory to the grading and cleaning of sections as is needed.

Cleaning and sorting sections is not hard work, but no part of my bee work do I dislike so much or find so tedious. It comes at a time when the weather is delightful, and one would rather be out doors than in; and when the bee-glue is soft and sticky and sticks to fingers and scrapers and everything it touches, the work does not progress very fast. Later on, the days are cooler, but I want to get the honey to market as early as I can; and, besides, there is other work yet to be done, and so I begin.

First, I fumigate the honey to kill any bee-moth and eggs that may lodge in the comb. To do this I pile the supers up carefully, three high, and place a small, shallow dish on top (save the lids of Lewis lye cans for this purpose.) This I fill with Bisulphide of Carbon, which I get at the drug store at 25 cents per can. Then, three more supers and another dish, and so on, until the pile is as high as I can comfortably make it, putting two little dishes of carbon on top, covering with several thicknesses of newspaper, which are weighted down tight by putting a super or heavy board on top.

I now use mostly wide frames and plain sections. Until within the last few years, I used T supers exclusively, but I have gradually discarded them. The T super is a good super, but, in a locality where there is much propolis, it requires too much scraping. The wide frames protect the tops and bottoms of the sections so they are as clean as when first put on the hive, except for a little bit along the edge; for, as my supers are five inches high, I have to use one-fourth inch slats in my frames. This is hardly thick enough; it allows them to sag a little and thus gives the bees a chance to crowd in a little bee-glue along the edge. Three-eighths inch would have been better.

When scraping and grading sections I have a long, low table about 4 x 10 feet, and about two feet high, at my right on which to place the cases and empty supers, into which I sort the sections as I clean them. In front of me is a low table (which is really a box) on which I place the super to be emptied and cleaned. Strips of wood tacked along the edge of the table keep the propolis from falling on the floor, and several sticks placed on top to hold up the super and allow any bits of wax or bee-glue to fall below.

To save my dress, an apron, which is nothing more than an old gunny-sack, is tacked to the table by its lower end, while a string is attached to the other

end to form the strap that goes around my neck.

For scraping, I have used a case knife, carpenter's scraper, sandpaper, broken glass, but I like best a little triangular-shaped, sharp-edged piece of steel, having a handle set in the center. It is a little wider than the width of a section and is a little awkward to use at first, but, with a little practice, it works better than a knife. I also have a tack hammer, case knife, lead pencil, paste, some tooth picks to pick out a dead bee or ant or a lump of propolis from the cells, and a glass of water and a small artist's brush to wash off any spotting on the nice comb. A cloth and pail of water to wipe up any dripping honey and a pail or jar to hold the broken pieces of comb, completes my outfit.

To put the paper tray in the case, I use a push board just fitting inside the case. This is not made of one solid board but of two boards set a little apart, so that the paper does not cling to the board when it is withdrawn. I also use a kind of frame which exactly spaces the strips at the bottom of the case.

Many bee keepers tack the strips to the bottom, but I like paste, or even honey, better, to fasten them with. Flour paste is good, but it sours soon. A library paste, which I make myself, does not sour and will stick every time. Here is the way to make it: Wheat flour, 8 oz.; powdered alum, $\frac{1}{4}$ oz.; water, $1\frac{1}{2}$ pt.; glycerine, $1\frac{1}{2}$ oz.; oil wintergreen, $\frac{1}{8}$ oz. (1 teaspoonful.) Mix water, flour and alum to a smooth paste and boil till it thickens. Be careful not to let it boil or cook too much. Take from fire, add oil and glycerine and mix thoroughly.

If too thick, thin with a little water. To paste on tin, add about a teaspoonful of muriatic acid. I make it without the acid, as I wish to use it on other things besides tin. To paste on tin, just scratch the tin a bit with a knife or a piece of sandpaper.

In grading, I try to let the sections at the glass give an idea of what there is in the case; and, as I put in each section,

I turn the best side towards the front. As I do this with all, it gives a much more even appearance.

I sort into four grades: Fancy, No. 1, No. 2 and unfinished. The first two grades are shipped to market. As much of the No. 2 grade is sold in the home market as it will take; the culls are sold as chunk honey; the rest is extracted along with the unfinished sections and used for baits the following year.

I used to grade into six different cases, putting sections of about the same appearance in each case, but making only three grades, fancy, No. 1 and No. 2. In this way all the sections in a case run very even and it is much the most satisfactory way. But since the No. 2 sec-

tions have been thrown out of the market, I have fallen in line with other bee keepers and I sort them into three cases the way they do.

I think it is a mistake that there is no market established for No. 2 comb honey. Such honey is produced at a loss and to have to extract them as we must, if our market will not take them, only adds to that loss, for it is work that is not paid for. Therefore, bee keepers are not as critical and do not grade as close as they would do if they could dispose of them better. They are a "by product" for which a market ought to be found.

CASSVILLE, Wis., Oct. 14, 1909.



Comb Honey Production Versus Extracted. Some Helpful Pointers.

LEO E. GATELEY.

INCOMPREHENSIVELY the production of extracted honey continues to rise in popularity, like the growth of a fourteen-year-old girl, whose skirts have to be let out every week.

In proportional ratio to the remarkable tendency in this direction, the question of over production, in its relation to section honey, becomes correspondingly obscure and inconsequential. This fact, taken in connection with the unbounded enthusiasm prevalent over the recently rediscovered chunk article, which will inevitably further diminish the available supply of comb honey, affords an uncompassed element in apiculture that should be alive with unlimited possibilities and vast significance.

Under normal productive conditions, a crop of section honey equal only to that which last year supplied the demand, would this year be inadequate.

The present situation is, therefore, deserving of the most critical contemplation

by those suffering from an ingrowing desire to switch off to either liquid or bulk honey. It is always the part of wisdom to be positive before relinquishing a passably good thing, that you have a better at command.

Not a single condition exists which augurs unfavorably for the section honey producer, but, on the contrary, the horizon presents a decidedly rosy aspect.

PROTECTION OF SECTIONS AND SURPLUS ARRANGEMENTS.

Inseparably connected with the profitable production of section honey is the immutable necessity of securing invariably a superior and high-grade product. The labor and time involved, and the cost of production covering a cheap and inferior article, is never less than for the more remunerative and salable kind.

Surplus arrangements allowing the bees unreserved access to any part, except the inside of section honey boxes, are but imperfectly adapted to securing

such a result. To the apiarist there may be nothing particularly repulsive in the appearance of bee-glue; but it is to the average consumer glaringly conspicuous when in evidence. So don't try to make a commercial commodity of propolis.

Although by much unprofitable and tedious cleaning, most of the propolis and discoloration can usually be removed from sections; once the wood has lost its soft, virgin whiteness, it is not within the range of possibilities ever again to produce the same immaculate and natty effect. Obviously, the only logical and insistent way to insure this pleasing and inviting appearance, is to use top-bars on the holders.

Regarded from a merely mechanical standpoint, the wide-frame super is, perhaps, slightly more complex in structure than some others; but in its thorough adaption to the economical production of fancy honey, it is the incarnation of efficiency and dwarfs, in comparison, all others to obscurity.

THIN SECTIONS AND UNSEPARATED HONEY.

To most bee keepers has at some time been manifested the urgent need for more open communication in section honey supers, but the dread of irregular and disfigured combs has prevented the majority from attempting the production of unseparated honey, while many others are undoubtedly prejudiced in their views and methods.

Many have endeavored to dispense with separators, and failed ignominiously, because the common, unnaturally thick section was used in the experiment. With sections more than $1\frac{3}{8}$ inch thick, bees require some assistance in keeping the combs straight. Through the adoption, however, of a narrow section, and the elimination of the neither useful nor ornamental separator, I have for several seasons past succeeded exceptionally well in producing section honey as readily and practically as cheaply as though it were bulk or even liquid honey.

That greater yields can be secured without separators, has been clearly

demonstrated, and, in accordance with the natural requirements of the bees, separators are omitted from all our surplus arrangements; and yet, the comb surfaces of practically every section is ideally smooth and entirely cratable, thus shattering fallacious traditions and dissolving superstitious fancies in regard to their fundamental necessity.

Our section and brood frames, being precisely of the same outside dimensions and interchangeable, I not infrequently, when short on baits, raise a new brood comb into a part of the first lot of supers given. Occasionally a number of section frames are given below to provide baits, and, if eggs are deposited in some of the cells, it does not in the least injure them for super use, though precaution must be exercised not to allow them to become confused with honey entering commercial channels.



The section frame depicted, had brood in three of the sections and was partly filled with honey, subsequent to its having emerged.

At the season's end, when the flow is o ttering, and danger of even super work

is imminent, supers are filled with such sections as they are found during the removal of honey and placed beneath colonies engaged in finishing, when work is resumed with vigor and dispatch.

Frames containing a small patch of brood will attract the bees above much sooner than will baits of empty comb, and, unless left upon the hive throughout the season, will not discolor the honey in adjoining sections.

Theoretically, such baits should accentuate the aptitude for the storage of pollen and darken the cappings of combs in proximity; but in actual practice, we have yet to encounter the first instance of pollen in appreciable quantities, or the least marring of adjoining cappings,

unless the sections have been too long left upon the hive.

LITTLE THINGS THAT COUNT.

Undoubtedly the most annoying and aggravating situation imaginable, is that of having a lot of new and accurately constructed hive-bodies, upon exposure to the elements, begin warping and gaping at first one corner and then at another. Unless dovetailed, many such corners will, in our climate, during a single season, begin acting in this disgusting and satanic way. To overcome this abominable tendency of square nailed corners, many of my hive bodies are, as shown in the picture, held firmly together at the corners by small 2 x 4 tin clips.

FT. SMITH, Ark., April 9, 1910.



Some Experience in the Use of a Cappings-Melter. Removing Honey Without Bee Escapes.

The following excellent article is from a Colorado subscriber who, for private reasons, does not wish his name or postoffice published.—EDITOR.

EDITOR Review: The different articles in the Review, describing the methods of taking off and extracting honey, have been very good; but as one method will not suit all, I will describe the equipment and method three of us used with a six-frame, power machine.

The uncapping box is just wide enough, so that the ends of the frames will rest on the sides of the uncapping box after they are uncapped and waiting to go in the extractor. The box is two feet long, and the bottom is open except for a piece of galvanized iron around the edges that projects in about two inches so that the cappings will not fall on the edge of the melter, which is just below the uncapping box.

The cappings-melter is the same size as the uncapping box, and is four inches deep inside. It is a double tank, the

outer tank being six inches deep, 21 inches wide, and 24 inches long. The inner tank is four inches deep, 17 inches wide and 20 inches long; leaving a two-inch water space all around. The open space between the top edges of the two tanks is covered, except a small hole for filling with water; this cover keeps the heat and steam from coming up in the face of the person doing the uncapping. The outlet is a tube leading from the bottom of the inner tank out through the side of the outer tank. This tube is always open so that the honey and wax can run out, as fast as melted, into an Aikin honey and wax separator; the honey running into a pail to be emptied in the barrel with the rest of the honey, and the wax into a tin mould. A screen should be used inside the melter to hold back the unmelted wax and refuse. This screen is the full width of the melter and

about an inch from the edge. We used a two-burner gasoline stove to melt the cappings.

When we arrived at the yard in the morning, the first thing we did was to fill the cappings-melter with water and start it to heating, then I fired up my smoker and got ready to take off honey, as that was my job. I used two wheel barrows, so one could be in the honey house while I was loading up the other; this method saved the time and hard work of lifting the loaded supers off the wheel barrow each trip. I used two, three or four 10-frame supers to a load, just as the occasion required. When working in the yard alone, I work on the west side of a colony (the colony facing south,) remove the cover and smoke as many of the bees out of the super as I can without taking too much time, loosen up the

frames with my right hand and keep the smoker going with the left; when the frames are all loose, I lay down the smoker and put the hive-tool in my pocket so I will know where to find it, then I take a good hold on a Goggsall brush, so I can use my fingers in handling the frames without laying down my brush, and shake the frames in front of the hive, getting most of the bees off, and finish up by brushing. By having extra combs to put back, a hive need be open only a minute or two, according to whether it has one or two supers, as it only takes about one-half of a minute to a super of nine combs.

One man did the uncapping, one tended the extractor and drew off the honey in cans. The honey was practically all sealed and the three of us handled between 400 and 500 pounds per hour.



Disposing of the Honey Crop to The Best Advantage.

FRED W. MUTH.

GOUR recent editorial on the above is an old subject, yet, always interesting and ever uppermost in the mind of the honey producer when he has any surplus to sell.

Concentration of mind on any one subject makes one master of his profession.

The production and disposition of a crop of honey to the best advantage is an art, in two branches, and I daresay with but few masters.

The large producers who have studied the wants of the public have solved the problem, and the disposition of their honey crop is the easiest; they always sell to the best advantage by having a good, reliable concern to whom they can ship all their honey and get their money in one lump the very day the shipment arrives, no matter how large or small the shipment may be. This does away with all the worry and annoyance of having to

peddle out their crop, which takes considerable time and energy, and it costs money to travel, which makes the cost of the crop so much higher.

Honest grading, attractive packages to invite purchases, and, above all, a square deal to the buyer makes him (the producer) every one wants to buy from; and the buyer is always looking for him. Perhaps you think he doesn't get the top of the market! Just imitate him and convince yourself.

Experience backed by facts worth reading: Two brothers-in-law told the writer last fall that their annual honey crop pays the running expenses of their respective farms. They sell their honey crop to the best advantage, raise extracted honey only, and ship it in barrels.

Another honey producer, who is now in his eighty-odd-years, produced a carload last season. He has good connections

and has learned the art of disposing of his honey to the best advantage.

Another party who last year produced 48,000 pounds of extracted honey shipped quite a lot of it to consumers all over the country and is still hoping for returns—he has it to learn.

Another, who hardly ever raises less than a carload a season, has his arrangements so perfect that the sale does not bother him in the least, for he has his mind now concentrated entirely on his production—he, too, has learned the art in both branches.

The above are only a few of the many instances, and, I could cite many. It is best to give the bright side of practical experience thus encouraging the pro-

ducers to follow in the footsteps of the successful.

CINCINNATI, Ohio, June 9, 1910.

[For several years we have been selling, on an average, 20,000 pounds of honey each year, and shipping it all over, from British Columbia to England, and from Maine to Texas, and we have yet to lose our *first dollar*. We get *cash with the order every time*, unless it is from some one with whom we are acquainted, and we know it is all right. If we can't get cash with the order, we simply *keep the honey*. It is incomprehensible to me how any producer can be so foolish and lacking in business sense as to send out honey indiscriminately all over the country, with only promises to pay.—EDITOR.]



Selling the Honey Crop as Looked at from the Dealer's Point of View.

HILDRETH & SEGELKEN.

REFERRING to your editorial on "Selling the Honey Crop to the Best Advantage," we beg to say that we have read this article very carefully, and we herewith give our views and experiences in as few words as possible; and think this is best accomplished by answering some of your paragraphs.

You say: "Did you ever stop to think that you spend all of your season producing your crop of honey, and then sell it in about fifteen minutes?"

QUICK BARGAINS NOT NECESSARILY
POOR ONES.

We answer that we have made many bargains on large crops of honey in much less time than fifteen minutes. Where a bee keeper has a good fair sized crop, averaging anywhere from, say, 5,000 to 30,000 pounds, he is pretty well posted as to market conditions, and knows just what he ought to

expect to realize for his honey in a wholesale way; particularly so, if his honey is put up in first-class shape, well graded, etc. We, as buyers, know that we have to pay full market value to these parties in order to secure their crop, and, as said above, the bargain is often made in much less time than fifteen minutes. As to California and the far South and West, business transactions are usually in car lots and the deal is generally made by telegraphing.

Many of our large shippers do not come to New York with their crop at all; they simply write us the approximate amount of their crop, set a price, and, if we find that their price is within reason, we take their honey at their offer, without making any counter bids. We have large shippers with whom we have had no trouble in dealing for years and years past, simply by correspondence. We know that they pack and grade their

honey properly, and they know that we are willing to pay them full market value.

Some buyers, of course, pursue another course—write all over creation for prices, and sell to the highest bidder. While they have a perfect right to do so, and are entitled to all they can get, we, as buyers, have discontinued making bids and letting others figure on our prices. We rather prefer having the bee keepers set their price, and if it suits us, we buy.

We can cite some instances where we took bee keepers up at their price, saying that we would take their honey, but never received the goods—evidently some other party offered them a little more. These cases, however, are few and far between, but they are the common occurrences every year.

On the other hand, we have many shippers, large producers, who will not sell to us, but *consign*; knowing that they receive better returns in the end. Where we buy outright, it is but natural that we expect to buy at as low a price as we can, taking our own chances on the market. Whereas, where we handle on commission, we charge so much for selling, and the shipper takes the chances of the market. We might say right here, however, that our shippers who consign to us, are invariably well pleased with the final returns.

You say further: "We can't all peddle our honey; we can't all sell it to retailers; we can't all build up a mail order trade; etc."

Very true. In some sections, no doubt, much more is produced than can be sold in the home or nearby markets, and these bee keepers, principally the large producers will have to depend on the large city markets. Some of them may not have the time to dispose of their product in a small way, and therefore would rather sell in the lump. Others may not have the necessary experience to build up a trade in a retail way, or to consumers.

Others figure that the traveling and advertising expenses would offset the

extra price they might receive, besides their loss of time. All of these things have to be taken into consideration. We receive numerous letters from small producers, some of them far distant, who have but small lots to ship, asking what we can do for them. We invariably advise them that we cannot encourage small shipments, especially from far distant points, and that they should certainly be able to realize a better price at their home or nearby markets than we would be able to realize them.

You say: "The great difficulty is in the heedless, thoughtless manner in which so many honey producers keep on selling their honey year after year in the same old way, etc."

Right you are! Take for instance in the East where we have quite a large trade. These buyers generally come to New York once a week in the fall of the year, and drop in inquiring about comb honey. Where we have to ask them 14 to 16 cents for white honey in a wholesale way, they say: "Why we are supplied right from our neighborhood and can get all the honey we want from 10 to 12 cents. These are instances where the small producers rush their honey into the nearby markets and large towns, and, not knowing the market value, take what they are offered, thus not only injuring themselves, taking far less than they ought to receive, but depressing the market in general.

You say: "The quality of the honey and the manner in which it is put up, etc., have a wonderful bearing upon the sale."

Exactly so. A fancy article put up in a neat, clean style, will always bring top market price, whether sold outright or sold on commission. If the editor could only see some of the lots of comb honey we receive, he would not wonder why we could not satisfy shippers. Some of the comb honey we receive we would rather not handle at all, as we cannot satisfy the shipper, for he expects as much for his goods as for honey put up

in first-class shape, thinking that his inferior goods ought to bring as good a price as a fancy article. Nor can we satisfy our customers.

We had one experience with extracted honey from Florida two years ago. One of our old shippers whom we have known for 20 years, sent a lot of honey, about 30 barrels. When the honey arrived, we found that every barrel of honey was fermented and soured. As good luck would happen, this very man was in New York, and we telegraphed to his hotel to come down immediately. He appeared the next morning, and we showed him the honey on our floor—every barrel fermented and soured. This party said: "Although I have known this house for so many years, I would not have believed it if I had not seen the honey myself." He could not understand how it happened. We told him it was simply a case of shipping un-ripened honey. The party who produced this honey rushed it to market without letting it ripen, and, naturally, it fermented and soured. We generally caution our shippers not to rush the honey to market until it is well ripened, but, off and on, we have experiences like the one above.

You say: "That a large crop of clover honey is expected this season, and that it is certain that the man who puts his crop on the market early this year will not make a big mistake."

From the reports thus far received, principally from New York State, we are

informed that the bees have wintered in first-class condition, are in first-class shape and that the outlook was never more promising for a good crop than this coming season. If this be the case, and a large crop should be produced, those producers who send their honey to the market at an early date, we believe will reap the benefit, and will make no mistake in selling at the beginning of the season.

Prices of honey, comb as well as extracted, have been fairly well sustained during the past few years, and are likely to hold their own during the coming season. We do not, however, look for any advance in prices. Trade conditions, in general, are not up to the standard, and not what they should be. Too many men are out of work, and it is mostly, at least to a very large extent, the laboring class who buy and consume most of the comb honey. Comb honey is a luxury and nothing else. If the laboring classes earn good wages, they are apt to spend a large share of it for these luxuries, but, if not, they will simply do without them. Other commodities they must have, but honey they can get along without. While extracted honey is used very largely for manufacturing purposes, the fact should be borne in mind that it is not exactly a necessity, and that large manufacturers *can* get along without it to a certain extent, at least, if prices are ruling too high and above the limit they expect to pay.

NEW YORK, N. Y., June 7, 1910.



EDITORIAL

Back of every successful business or enterprise are somebody's bright brains.

"Be Sure you are right, then go ahead," is an excellent motto, but don't spend so much time deciding what is right, that there is no time to go ahead.

Blowing bees off the combs with compressed air brought into the yard with a hose, from an air pump, is something that G. W. Haines of N. Y. tried, and wrote about it to Gleanings. It blew the bees off all right, but that wasn't all; it blew the unsealed *honey* out of the combs.

Mr. N. E. France has mailed his 13th annual report as inspector of apiaries for Wisconsin. Besides his regular report it contains much other useful and entertaining matter.

Vermont will have a fine crop of honey this year. My old friend, J. E. Crane, writes me that they will have about 30,000 pounds of comb honey and 10,000 of extracted.

The Raspberry honey crop was a complete failure in Northern Michigan on account of drouth. Bees are working nicely now on willow herb with every prospect of securing a fine crop.

The National bee keepers' association will hold its annual convention in Albany, N. Y. October 12 and 13, 1910, in the common council chamber of the city hall. Other details will be given later.

Several Dealers were invited to contribute to the discussion on marketing honey. Thus far, only two have responded—their articles appear in this issue. I would be glad to have them present their side of the case.

An Announcement of the marriage of Bro. York of the American Bee Journal has been received at the Review office. It reads as follows:

Mrs. Josephine Hitchcock announces the marriage of her daughter Grace to Mr. Geo. W. York on Saturday, July second, nineteen hundred and ten, Kingston, Ills. At home after September first, 4522 North Ashland Avenue. Ravenswood, Chicago.

The Review wishes Bro. York and his bride a long, happy and useful life.

Dr. E. F. Phillips, in charge of apiculture, Bureau of Entomology, Department

of Agriculture, Washington, D. C., brightened the Review office by a call in June. He was making a tour of Michigan, Ohio, and I believe part of Illinois and Indiana. He was doing this that he might study the foul brood situation from a close, actual, personal view. He is making colored maps of the different states, showing the regions where American and European foul brood abound. This department is gathering an immense list of bee keepers, securing them largely through postmasters, and to this list is sent educational literature on the subject of foul brood. The Department is using every effort to combat bee diseases. If you find any diseased brood in your apiary, and are at all doubtful, write to Dr. Phillips.

Selling Honey to the best advantage is a subject that will largely occupy the pages of the Review during the next two or three months. It will be remembered that I opened my recent editorial on the subject by quoting from a circular sent out by the secretary of the Michigan state bee keeper's association, to the effect that most of us spent the whole season in producing a crop, but sold it in about 15 minutes. It was amusing to see how much attention was bestowed upon this point. The most of them seemed to think it was all right to sell in 15 minutes—that that was time enough in which to effect a sale. They seemed to miss the *real point* of Bro. Tyrrell's graphic little sentence. What he meant was that the subject was given only that much time for *consideration*. Of course, if the matter of price, market, etc., have all been duly considered, 15 minutes is enough to say: "You can have it."

Thickness of Top Bars.

Dr. Miller calls attention to my preference for 7-16 top bars, and says he can't see much difference between these and the $\frac{3}{8}$ -top bars which he knows will sag. One-sixteenth of an inch is not much,

but it does make some difference when laid along on top of a top bar. I know that a $\frac{3}{4}$ white pine top bar is quite likely to sag, if no comb guide is used, but there is other wood suitable for top bars that is much stiffer than white pine. I have used thousands of 7-16-top bars made of yellow poplar, and never had one sag a *particle*.

Don't Extract Unripe Honey.

I wish that every one would read, and ponder over, the article in the extracted department on ripening honey on the hives. Notice the point the author makes about furnishing storage room on 100 colonies for about \$200. This is a small consideration, however, in comparison with the importance of putting thoroughly ripened honey on the market. What would we think of a fruit grower who would put half-ripe strawberries on the market? Half-ripe honey is no better. I know it is sacrilegious, but I do sometimes feel like exclaiming: "For God's sake, don't extract green honey!"

Where a white honey harvest is immediately followed by a dark flow, the temptation is great to extract unripe white honey to get it out of the way of the dark flow that is to follow, but I would allow the white honey to go over and mix with the dark before I would extract unripe honey. It is the bane of our business.

The Child is Father of the Man.

This is an old saying showing that the natural bent of the mind sometimes shows very early in life. I can give an illustration along this line. It has no connection with bee keeping, and I'm going to tell it simply because I want to.

My little eight-year old grandson, Bruce Hanneman, who really makes his home with us, has a real passion for machinery. He not only manipulates, but thoroughly understands the mechanism of my type writer. I overheard him one day explaining the different parts to his grandmother. This does that, and

that is for this purpose, and if you do so and so, then such and such things will happen, etc.

I'm never with him when a locomotive goes by, that we don't have to stop and "watch it out of sight." I think the fireman of one locomotive must have been a good judge of human nature, and seen the wistful look in the eyes of Bruce, as he took him upon the engine for the three minutes that the train stopped, and showed him the shining levers, and handles, and the big fire box with its fire of glowing coals. Bruce talked of the adventure for a long time after reaching home, but finally gave up in despair trying to make his grandmother understand the uses of all the "handles" he had seen.

Our daily paper is printed on a triple-deck Hoe press, which is as big as a threshing machine, and composed of a mass of wheels, rollers, cylinders, shafts, etc. I took Bruce to see it one day just as they were ready to start. The pressman turned a little current of electricity on the motor, and the wheels began slowly to revolve. There was a watchful examination of the different parts to see that all was working smoothly, then a little greater speed was given. All went well, and, finally, the lever was pushed clear over, and the machine sprang into life with a roar. Wheels revolved, cogs purred their rythm, rollers rolled, big rolls of paper gave off their long sheets of wide, white ribbons of paper, the printed and folded papers dropped out into the shute with a "clip, clip, clip," faster than you could count. I was watching Bruce carefully. He stood wholly absorbed for quite awhile, then looked up in my face and smiled. I have seen him smile thousands of times, but never with the *meaning* there was expressed in that smile. It told more than could have been told in a flood of words.

As we trudged home, hand in hand, he looked up and said: "That's the best thing we have ever seen, isn't it grandpa?"

The reader will please pardon the garuillity of said grand father.

Bee Escapes Versus Brushing.

Of late the Review has been publishing several articles from men who are successful in removing extracting combs without the use of bee escapes, even in times of scarcity when robbers stand ready to make trouble. I haven't the least doubt that some of these plans are practical, in fact, I expect to give some of them a trial, personally, here at Flint, in extracting about 100, ten-frame supers of honey. Not only do I wish the actual experience myself, but I wish to avoid the trouble and expense of warming up the honey.

The use of bee escapes enables one to free supers of bees with the least possible labor. To their use there can be only two possible objections, viz., that some time must elapse while the bees are passing out, and that the honey thus removed is too cool to extract and must be warmed up artificially. Suppose that a man wishes to take a crew and drive out several miles to an out-apiary, extract the honey that day, and return at night, it is evident that the bee escape has no place in such a plan. In order to use it, some one would have to go the day before and put on the escapes; then, after the honey was off the hives, it would have to be warmed up, which takes time.

Honey extracted in warm weather is in condition to extract when the bees are brushed or shaken from the combs, but if it is left on the hives until cool, fall-weather, it is too thick and too cold to extract to advantage even when taken right from the bees, especially if the extracting is done by hand. If the honey is to be warmed artificially, then there is no question whatever of the superiority of the bee-escape plan. Two men can put a bee escape board on a hive in five seconds, and the next day the super can be lifted off entirely free from bees.

For ease, and amount of labor, certainly no plan can surpass this. As our extracting is not done until late, when the honey is thick and cold, and must be warmed to extract by hand, there is no question but what the use of bee escapes is the best plan for us. We have arrangements for eating and sleeping at our out-yard, and we go there and stay, and take our time for it, until the extracting is all done. The honey is removed without the least disturbance, and with very little labor, then warmed up and extracted. All told, more time is consumed, probably, than by brushing off the bees and thus avoiding the warming of the honey, but the hurly burly of the honey flow is over, and there is no necessity for haste; and one thing more, the quality of the product is *unsurpassable*.

As I have said so many times, each man must work out a plan that is best adapted to himself and his environments.

Editor of the Review has been Sick.

As a rule, I don't weary my readers with my troubles, but it is due to those whose letters went unanswered, and to those who wondered why the July Review was late, to know the reason why.

Each summer, for the last two or three years, I have suffered more or less from what the doctors say is a sluggishness of the organs of elimination, allowing the system to become overloaded with waste matter. As soon as cool weather comes in the fall, I "brace" up and feel well all winter, but, with the advent of warm weather comes trouble—a lowering of the vitality. Even out-door exercise does not overcome the difficulty. I had been feeling bad all of the spring, but kept working away on "nerve." I had just begun to put supers on the hives here at Flint, and, fortunately, had the copy all ready for the July Review, when a fever set in. Right in that hottest of weather, for 10 days, my temperature was 103. In one sense, I suppose Nature was burning up the garbage. The remedy was

heroic, but probably was my only salvation.

Within two hours after the fever set in, I telegraphed my brother Elmer to send one of the boys down to put on supers. John came the next day. So well acquainted was I with the conditions of the apiary, that I was able to give him instructions what to do. He found some of the colonies hanging out for lack of room. He stayed several days, getting hives, frames of foundation, etc. ready, and putting them on as needed. Soon after he went home, I was able to ride to the apiary and lie in the shade and give directions to a bee keeper living in town who managed to get away from home a few hours, two or three times.

It was close, hard work, to thus keep things moving, when weak, and not able to scarcely lift a finger, but I did manage to save the honey crop.

My daughter (Mrs. Hartshorn) answered the mail, as best she could, and Mr.

Hartshorn and the folks at the printing office got out the July Review as best they could (and they did pretty well) and so we have squeezed through.

A peculiar feature of my trouble is that it soon disappears if I go to Northern Michigan. There is something about the pure water, the cool nights, the bracing atmosphere, that soon removes all of my trouble and puts new life into my veins. I have gone there when I was so weak that I could not saw off a board without stopping to rest, and, in a week, I would be swinging a pick or a shovel in building a bee-cellar. I remember one time when I gained a pound a day the first week I was there. I don't know but I'll yet be compelled to spend most of the time, summers, in this region.

I am now on my way to Elmer's, where I shall stay until I have fully recovered. If there should be a lack of editorial matter in this issue, you will know the reason why.

Selected Articles.

AND EDITORIAL COMMENTS.

RHEUMATISM AND BEE-STINGS.

Some Forms of the Disease are Relieved by Stings, Others are not.

Pages and pages of space have been wasted in bee journals by correspondents arguing as to whether rheumatism is cured or relieved by the sufferer being stung by bees. The whole difference of opinion, and of experience, has arisen from the fact that there are various forms of rheumatism, and that patients are affected differently. Some forms of the disease can be cured or relieved by the application of stings—others not. I have never seen this whole matter more clearly explained than it is in an article

in Gleanings by a correspondent who signs himself: "A Michigan Country Doctor." Here is what he says:

I have been instructed, amused and depressed as my mind has been played upon by the various references I have seen in professional, miscellaneous, news and special journals upon bee-sting poison and rheumatism. I have experienced these different mental modalities as sense, nonsense and ignorance are exposed by the various writers. I note in Gleanings occasional discussions of this subject. I am not an expert in the ways of bees nor in the production of honey. I am only a country doctor who studies, among other subjects of routine, "rheumatism." Any one who is looking for a cure for rheumatism is searching for what he will never find. One who is looking for a relief for his own rheumatism may find it.

The old-fashioned notion that there is a cure for a disease—i. e., that a disease separate and apart from its peculiar manifestations in the person who has it, has a medicine that will operate curatively, is no longer held by any one who has a comprehension of the nature of diseases and the action of remedies. Diseases manifest themselves differently in different people. In one, so-called rheumatism manifests itself in one way; in another person its manifestations are as different as if due to another cause. Some have the pain located in the back, others in the trunk, some in the small joints, others in the large ones. In some the pains are muscular; in others they appear to be in the tendons and sheaths of muscles. In some it hurts all the time; in others pain is periodical, or aggravated by particular conditions. Some have fever with rheumatism, and are sick abed. Some have heart-valves and heart-muscle involved. Some can not move; others are so restless they cannot keep still. Now, to relieve the particular manifestations of the rheumatic affection a remedy must be selected that corresponds to the individual's case. Every person has his own individual rheumatism. Be the aggravation in his heart, general muscular system, tendons, sheaths of muscles, joints, or where it may be, it is affecting him differently, and he is a different "rheumatic," just as he may be a child, or a grown-up person, one with good habits, is afflicted with other taints, is rugged or weak, plethoric or anemic, exposed or well housed, confined to bed, or impelled to move about for relief, etc.

Physicians no longer prescribe medicines for diseases. They prescribe for the sufferer who has the disease, and dispense the remedy as indicated by the signs and manifestations in his particular case.

The actual cause of rheumatism is not known; but it is known not to be uric acid. Uric acid may be the cause of gout, but not of rheumatism. The opinion generally prevails among scientific physicians that rheumatism is a germ disease, although the exciting microbe or microbes have not been satisfactorily identified (see *Med. Record*, Dec. 11, 1909, p. 976.) Some rheumatics are relieved by salicylic acid, some by colchicum, some by aconite, some by one remedy, some by another. There is no specific for it. Consequently, if bee-poison will relieve a form of expression that rheumatism may take, it is foolish to expect it to relieve all, any

more than salicylate of soda will relieve all.

There is a type of rheumatism, or rheumatic-like ache and pain, that will be relieved by apium virum—the poison of bee stings. The kind of joint and muscle aches and pains that will react to the bee-poison is that accompanied by local dropsical swellings about the parts affected. The skin around the sore spot is waxy and pale in appearance. The urine is usually scanty. The pulse is quick, hard and small in severe cases.

Many cases of heart involvement with fluid in the "heart-sack" yield to it. The synovial (or joint) membranes are particularly frequent seats of the swelling that will respond to this treatment.

The cases of rheumatic-like states that will be relieved by the bee-poison are not the most common kind by any means. That is the reason that all who are afflicted with the ailment are not relieved by the treatment. Those cases that have been reported as cured or ameliorated have been the ones to which the poison is remedial; those that have not reacted needed some other kind of remedy, which may or may not have been one of a dozen.

The virus of honey bees is a commodity in the drug market, and is to be had from pharmacists for dispensing. It has its indications in the therapeutic field, and is in the armamentarium of hundreds of physicians. Those who know how to use it, and who understand its clinical indications, rely upon it with as much confidence as is to be reposed in any drug. I believe that there are dealers in and producers of bee products who can tell something about "orders" from pharmacists for the "raw" material from which the remedy is produced.

The editor of *Gleanings* comments as follows:

While our correspondent modestly signs himself "A Country Doctor," one of our staff happens to know something of him. Dr. — is connected with a great institution where his opportunity for observation and treatment of rheumatism is much greater than most doctors have. We know, too, that he had under his care one of the most severe cases of rheumatic affection that is often seen, and this case came from a bee keeper's family. We can only add that our confidence in his judgment, as shown in the case mentioned, is unbounded, and we know his article is inspired by a desire to be helpful, and to set our readers right on this matter.

BEE-RIPENED HONEY.

It Takes Time to Ripen Honey on the Hives, but it is Superior to all Others.

The foundation of a honey market is well-ripened honey. I am satisfied that no honey is the equal of that ripened by the bees. The practice of extracting honey when it is only partly sealed over, can not be too strongly condemned. Not only ought it to be sealed over, but left on the hive to ripen. It is a pleasure to know that this view is being adopted and advocated by such men as W. P. Southworth, Manager of the Western Honey Producer's Association, who has a most excellent article on this subject in *Gleanings*. Here is what he says:

All bee keepers are interested in the production of ripe honey, if they are striving to put the best honey on the market that can be obtained anywhere. This cannot be done unless the honey is ripened on the hive. Bee keepers are also interested in increasing the consumption of honey, and not much can be expected along this line until all will allow the honey to be ripened on the hive. There has been a good deal of nectar sold as honey, and the consumer who received it has noted the peculiar taste, to say nothing of its tendency to sour. He is, therefore, not anxious to buy honey again, and is suspicious of all that is offered him.

The first two years nearly all the honey came to us in small lots, and we soon noticed that there was quite a difference in the quality and density. This led to close examination and tests, and the cause was soon located. Some of the honey had been extracted too green. One such lot that was received in the fall of 1908 soon began to show signs of outgrowing the cans, and, in some cases, the cans could be heard to hiss if the day were warm and the room quiet. This honey was at once heated to see if the fermentation could be stopped. We succeeded, by warming it up well, and removing the heavy scum that gathered on top of the honey in the tank; but the flavor was ruined for table use. Two-thirds of the honey in these cans was granulated; but the part remaining liquid was very thin. This experience and many others led us at once

to be on our guard against green honey. Last year we had to refuse a number of lots of honey that were offered, because the samples showed that the honey had been extracted before it was properly ripened.

We have been very much interested in the article that appeared in the American Bee Journal, entitled "The Two Cans of Honey," and we wish that every bee keeper might read it, and also the note on the same subject by Mr. R. A. Burnett, of Chicago. The Agricultural Department at Washington has published a bulletin, No. 75, entitled "Production and Care of Extracted Honey," the price of which is 5 cts. I wish every producer of extracted honey would get one of these and study it carefully.

This subject of ripening honey on the hive does not apply to extracted honey only, but, to quite an extent, also to the production of comb honey. The delicate white sections that are removed from the hive early, and not marketed immediately, sometimes become damp in spots, drops of moisture even collecting on the cappings, and the nectar in the open cells becomes "bubbly" and runs out. These are indications that the honey, though sealed, was not perfectly cured or ripened.

The retail dealers are nearly all glad to get this delicate white honey; but if some of it ferments, the party that sold it to him will get something, when he calls again, that is not pleasant. I have had some experience along this line, both with the dissatisfied dealer and with the sour comb honey. Last season we had to melt up considerable comb honey that had begun to sour, and save what we could of it and the wax.

We can produce nice comb honey in favorable seasons, have it look nice and clean, and remain so for a long time; but we must not be in a hurry to take it off the hive nor to produce it close to old combs that have been used for some time for brood-rearing, as the bees are sure to take some of that dark wax to use in the cappings of the comb honey, especially if it is late in the season.

The climatic conditions have considerable to do with the length of time that it takes the bees to ripen honey. Last year the process was very slow in this locality on account of the continued cool, damp weather. From a bulletin published by the Agricultural Department at Washington, entitled "The Chemical Analysis and Composition of Comb Honey," I note the following: "In the modification of the nectar by the bees

several changes in the composition are produced. Among the most important of these is evaporation of the nectar to a water content of about 20 per cent. This is effected in the hive by the bees exposing the nectar in thin layers to the action of a current of air produced by the fanning of the wings. This evaporation is further hastened, according to some, by a process of regurgitation, the nectar being continually thrown out from the honey-sac on the partly doubled tongue, and then drawn in again until, by the movement of the air and the heat of the hive, the nectar is sufficiently reduced to be deposited in the cells of the comb.

"Another change of considerable importance which takes place while the nectar is in the honey-sac of the bee, and also probably during evaporation and storage in the comb, is the inversion of a considerable part of the sucrose in the nectar through the action of an inverting enzyme secreted by the bees.

"Another modification produced in the nectar by the bees is the introduction of a minute quantity of formic acid. This acid is wanting in the pollen and nectar of flowers, and is supposed to be introduced into the honey by the bees just before the capping of the cells. The formic acid thus introduced by the bees is supposed to act as a preservative, and prevent the honey from fermenting."

I am a great admirer of E. W. Alexander, and have one of the copies of the little book which contains his writings, which I have read often. So far as I have had an opportunity of working out his plans I find they are well suited to the conditions existing here in this locality of the middle West with one exception, and that is his method of extracting the nectar from the combs before it is sealed or even well evaporated. In Mr. Alexander's locality, and with his equipment and methods, this process may work out; but in this locality, and with the equipment that the average or even extensive bee keeper has, I believe this plan is worse than a failure—it is a damage to the honey market. I am of the opinion that no producer of extracted honey should try it unless he wants to enter quite extensively into the manufacture of honey vinegar, and I doubt if the nectar will make as good vinegar as ripe honey would.

Some bee keepers favor the frequent extracting of the green honey on account of the apparent economy, believing that it will save them something in the way of investment for fixtures, such as extra

supers, frames, foundation, etc. But from an economical standpoint alone, to say nothing of the quality of the honey, I find that it is easy to prove that having the extra fixtures, and allowing the honey to stay on the hive until the end of the season, and then making a business of extracting at one time, rather than be dabbling in it at intervals during the summer, is the cheaper method, for much more time is sure to be wasted at each small extracting than would be wasted if the work were left to be done all at once.

Some argue that frequent extracting of the honey from the combs stimulates the bees to greater effort to gather more to replenish their scanty store. On this question Mr. Dadant thinks that the more stores the bees accumulate the more they will continue to gather, provided they have the combs to store it in; that is, they are not unlike human beings in that they work the hardest when they are prosperous; but if their hard earnings are continually taken away, they become discouraged, and are more likely to give up trying to get ahead.

However, leaving out this phase of the question, we all know that, if we are going to extract partly ripened nectar, we must have large, open tanks to put the honey in for further ripening and a suitable building to hold the tanks. A ten-frame super complete with frames, nailed and painted, is catalogued at \$1.15, and 1½ lbs. of foundation is worth in small lots 58 cts. per lb. or 73 cts., and if we add the labor of putting in the foundation at 12 cts. per super we have a total cost of \$2.00 per super. Thus if we are fitting up for 100 colonies we have a total cost of \$200 for the one extra super over and above the equipment that we should have to have if we followed the other method. Now, I do not believe that we can purchase tanks and build a suitable house, in these days, for \$200, that will last as long as those supers and combs.

But the all-important question with the consumer is the flavor of the honey that he is eating; and if we want him to eat more honey we must give him the thick, delicious honey with the bouquet of flowers in it; and we cannot get this from nectar, nor can man ripen the nectar so that it will be equal to the honey the bees have finished. There is a big demand for good honey, and I predict that the fields will be taxed to their limit to supply this demand when the bee keepers will join efforts in producing the right kind of honey. I do not

think that the consumption of honey will increase until a good article is put on the market almost universally.

Three years ago I extracted a lot of choice clover honey which I supposed was thoroughly ripe, and I wanted to get it out of the hives before it should become mixed with the dark fall honey. This honey was put into cans and pails very soon after it was extracted, and sold. Later in the fall I was trying to sell some more honey to a man to whom I had sold some of this choice early honey, and he objected very strongly, saying that the other honey that I had recommended to him so highly had fermented, so that he had to throw it out, and he had made up his mind after this that he would buy comb honey. This is where I got my first intimation of what it means to produce real good honey. Some of that nice clover honey that I had in the house I noticed was changing rapidly, and it soon spoiled. I now know that I can produce good extracted honey, and I know that the whole bee keeping fraternity can do it. The people will then consume our product without complaint.

Caucasians, Carniolans, Banats, Cyprians.

Select untested queens \$1.00 each, five for \$4.00. Imported breeding queens, \$5.00 to \$6.00. Send to original importer who has spent 13 years in foreign countries investigating these and other races of bees.

Frank Benton, Box 17, Washington D. C.

Marshfield Sections,

Until further notice, \$4.00 per 1000 for No. 1. Best Dovetailed Hives, with Colorado covers, 8-frame, \$1.35 each; 10-frame, \$1.45 each. All other supplies as cheap. Berry baskets and crates kept in stock. Catalogue free. Address the Bee Supply Man of Central Michigan. 2-10-1f

W. D. SOPER, Jackson, Mich.

PAPER CUTTER FOR SALE

The Review printing office, and another office in town, have joined forces, and, as a result there is a nearly new, Peerless Gem, 25-inch, paper cutter for sale.

The frame is strong and heavy and well-braced, the knife thick and deep, yet it is the easiest working cutter that I ever used. The lever is adjustable, returning from the cut with the least possible exertion, owing to the perfect balance; there are side gauges and front and back enameled measuring gauges.

We paid \$105 spot cash for it only a few months ago, it has always been used carefully, and could scarcely be distinguished from a new machine; in fact, it is really worth just as much as a new cutter, yet we would be glad to sell it for only \$80.

W. Z. Hutchinson, Flint, Mich.

SWARTHMORE'S PEDIGREED GOLDENS

Queens from the well known SWARTHMORE Apiaries of the late E. L. Pratt. The brightest *hustlers* and the most *gentle* pure strain of Goldenes in the United States.

The Swarthmore Apiaries, Swarthmore Pa.

7-10-3t

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying-press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.

Italian Queens

By Return Mail. Bright, Golden and Red

Clover Stock, Bred for Beauty

and Business

Send: Untested in May, \$1.00 each, or six for \$5.00. Tested, \$1.50 each. After June 1st, 75 cents each; three for \$2.00, six for \$3.75 or \$7.00 per dozen. Tested \$1.00 each. Nuclei on two frames (Hoffman or Danzenbaker) with young queen in May, \$3.00; after June 1st, \$2.50. Safe delivery guaranteed. Circular for 1909 ready. Send for one, it will interest you.

Geo. W. Barnes

3-08-1f

Box 340, Norwalk, O.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

A \$20.00 Queen for Only 40 Cents

The demand for our fine, **Standard-Bred Untested Italian Queens** is increasing rapidly. Read what two of our pleased customers have to say:

George W. York & Co.:—Our white clover lasted only two weeks, and while my average yield of honey per colony was about 40 pounds of surplus, the bees from the queen you sent me have gathered, so far, more than 100 pounds of fine honey. They are hustlers indeed, and the bees are very gentle. **Twenty dollars would not buy that queen.** After this I know where I will get my queens.—G. A. Barbisch, Houston Co., Minn., July 11, 1910.

George W. York & Co.:—I have had a good many queens from you in the past, and have never gotten a poor one.—Rev. Milton Mahin, Newcastle, Ind., July 18, 1910.

One of the above fine queens we send with the American Bee Journal for one year—both for only \$1.40. The Bee Journal alone is \$1.00, so the queen costs you in this way only 40 cents. A queen without the Bee Journal would be 75 cents; 3 for \$2.10; 6 for \$4.00; or 12 for \$7.50. Queens sent almost by return mail. Now is the time to requeen your colonies. Sample copy of the Bee Journal sent free on request. Address

GEORGE W. YORK & CO., 146 W. Superior St., Chicago, Ill.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER MILK BOTTLES

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POUDER, Indianapolis, Ind.

859 Massachusetts Avenue.

“DADANT'S FOUNDATION”

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER'S FOUNDATION

and WORKING your WAX for you.

Write us for ESTIMATE on full LINE of SUPPLIES. It will pay you and costs nothing,
RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

Standard Goods

Of the A. I. Root Co. I have them Hives, Supers, Sections, Foundation, Smokers. Shipping cases: also A. B. C. in Bee Culture. Kept in stock ready to ship. Beeswax wanted. Catalog free.

D. COOLEY, Kendall, Mich.

ITALIAN BEES and Queens and Supplies. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-11t

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 90 cents; tested \$1.10; select tested, \$1.45; breeder, \$2.20. One-comb nucleus, 95 cts. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation. 5-10-t

J. L. STRONG, Clarinda, Ia wa
200 East Logan St.

White Clover Honey

According to my individual taste, no honey is superior to white clover. It has a mild, yet distinctive and delightful flavor. If you have never tasted pure, white, clover honey, there is a treat in store for you.

Here in my little apiary at Flint I have produced about 3,000 pounds of this kind of honey. At this date (July 18) the honey is still on the hives, ripening; but I expect to be extracting it about the time that you receive this issue of the Review. I shall put it up in *new*, 60-pound, tin cans, and offer it for sale at the low price (for this year) of ten cents a pound—\$6.00 for a 60-pound can.

Remember, this will not be the ordinary honey such as you usually get; it will be thoroughly ripened thick, rich and aromatic. If you care to do so you can send me ten cents and I will mail you a sample, and the ten cents may apply on any order you may send in.

I can probably fill your order as soon as it is received—certainly, very soon afterwards.

W. Z. Hutchinson
Flint, Mich.

P. S. Part of this honey is now extracted; and orders can be filled promptly.

Glass Jars Cheap

Last year we got an order from a jobbing firm to furnish a large shipment of honey put up in square, glass jars—one pound and dime sizes. After the bottles had been ordered and made, and were just ready to ship, from Pittsburg, Penn., the order was countermanded. This left us with the jars on hand, and, unless we put forth an extra effort to sell them, it looks as though they would remain unsold for a long time.

The jars are of white, flint glass, plain; that is, have no lettering. The pound size can be used with either corks or paper discs. The latter are much cheaper and really more desirable than corks.

The small size holds five ounces of honey, and is known to the trade as the "dime" jar. The regular retail price, with corks, is \$3.25 per gross, but we will furnish it, with corks, at \$2.75 per gross.

The other size is the one pound jar, and, with corks, the regular price is \$5.75 per gross, but we will sell it, with corks, at \$4.50 per gross, or, with paper discs, at \$4.00.

Goods will be shipped direct from Pittsburg, Penn. Address

Snyder Bee and Honey Co.

Kingston, N. Y.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—Quote us on honey at the following prices: Fancy white comb, 17 to 18c, No. 1 white, 16 to 17c; fancy amber, 13 to 14c, white extracted, 9 to 10c; amber extracted, 6 to 8c; beeswax, 32c.

BLAKE, LEE CO.
4 Chatham Row,
Boston, Mass.
July 22, 1910.

CHICAGO—We quote the following prices: Fancy white, 17c; No. 1 white, 16c; fancy amber, 12 to 13c; No. 1 amber, 10c; fancy dark, 10c; No. 1 dark, 9c; white extracted, 7 to 8c; amber, 6 to 7c; dark, 6c; beeswax, 31 to 32c.

R. A. BURNETT & CO.
199 S. Water St.
July 15, 1910

CINCINNATI—The market on comb honey is brisk. Fancy white comb is selling in a wholesale way at 15½ to 16c; fancy extracted at 8½ to 9½c; amber in barrels from 6½ to 7c. Beeswax is in fair demand at \$33 per 100 pounds. These are our selling prices, not what we are paying.

G. H. W. WEBER & CO.
2146-2148 Central Ave.
July 26 1910

DENVER—We quote strictly No. 1 new crop comb honey in a jobbing way at \$3.60 per case of 24 sections, No. 2 at \$3.15. Last season's crop is now all cleaned up. Extracted strictly No. 1 white at 8½c, light amber at 7½c, amber and strained at 6½c per pound. We pay 25c for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASS'N.
F. Rauchfuss, Mgr.
Denver, Colo.
July 19, 1910

TOLEDO—The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.,
Feb. 19, 1910. Toledo, Ohio

KANSAS CITY—The demand for both comb and extracted honey is good and receipts light; so far we have been able to sell receipts upon arrival. We quote: No. 1 white comb per case of 24 sections, \$3.50; No. 2 white comb, \$3.00 to \$3.25; No. 1 amber comb, \$3.00 to \$3.25; No. 2 amber comb, \$2.50 to \$2.75. Extracted, 7½c per lb. Beeswax 25c to 28c per lb.

G. C. CLEMONS & CO.,
July 21, 1910 Kansas City Mo.

CINCINNATI—The demand for new comb honey is very good. We have been receiving quite a number of shipments of late and the fancy is selling from the store at from 16c to 17c per pound by the single case. Strictly fancy water white extracted honey is selling from 8c to 9½c per pound in 60-pound cans, 2 cans to the crate. Amber honey from 5½ to 7c per pound, according to quality and quantity bought. The above prices are what we are selling at, not paying. Kindly govern yourself accordingly when you are offering your honey for sale. We are paying 25c per pound for average run of beeswax and if you have something choice we will pay 30c delivered here.

THE FRED W. MUTH CO.,
July 16, 1910. 51 Walnut St., Cincinnati, O.

NEW YORK CITY—We are receiving shipments from the South and same find ready sale at from 13 to 15c a comb, according to quality. While it is too early as yet to say what the crop will be in the East and Middle West, from the reports we have received thus far, we should say that a good sized crop of white clover honey will be produced. As to extracted, the market is in good shape. As the crop on the Coast is exceedingly short, prices are firm, even for what is carried over from last season, as well as for the new crop. New crop southern is arriving quite plentifully, and selling at from 65c to 70c per gallon for common average, and 75c to 85c for choice and fancy. Beeswax firm at 30 to 31c.

HILDRETH & SEGE KEN
July 20, 1910 265 Greenwich St.

Carniolan Queens

	One	Six	Twelve
Untested	\$.75	\$ 4.00	\$ 7.20
Tested	1.00	5.50	10.00

Carniolan bees are natives of the cold Alps Mountains. They are very hardy as the severe winters have a tendency to weed out the weak colonies. They have great wing power. Have bred these bees exclusively for fourteen years and have tried queens from nearly all the queen breeders of the different districts in Northern Carniola. Running for extracted honey, they rarely swarm, if given plenty of drawn comb and kept in the shade.

Wm. Kernan, R. F. D. No. 2, Dushore, Pa

Root Automatic Extractors



- No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$23.00
- No. 27—Four-frame Root Automatic for frames not over 11 $\frac{3}{4}$ in. deep, 34 in. in diameter (weight 210 lbs.) 27.00
- No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00
- No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00
- GASOLINE ENGINE** with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

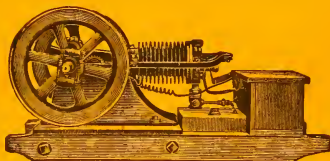
We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of

labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



The A. I. Root Company, Medina, Ohio

SEPTEMBER, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 250.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Sept. 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Clubbing List

I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1 75
American Bee Journal, (new).....	(1 00).....	1.75
Canadian Bee Journal.....	(1 00).....	1.75
Ohio Farmer.....	(1 00).....	1.75
Farm Journal (Phila).....	(.50).....	1.20
Rural New Yorker.....	(1 00).....	1.85
The Century.....	(4 00).....	4.50
Michigan Farmer.....	(1 00).....	1.65
Prairie Farmer.....	(1 00).....	1.75
American Agriculturist.....	(1 00).....	1.75
Country Gentleman.....	(2 50).....	3.15
Harper's Magazine.....	(4 00).....	4.10
Harper's Weekly.....	(4 00).....	4.20
Youths' Companion.....(new).....	(1 75).....	2.35
Cosmopolitan.....	(1 00).....	1.90
Success.....	(1 00).....	1.75

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of members.

To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

President.

W. D. WRIGHT, Altamont, N. Y.

Vice-President.

LOUIS SCHOLL, New Braunfels, Texas.

Secretary.

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G. M. DOOLITTLE, Borodino, N. Y.

R. A. HOLEKAMP, St. Louis, Mo.

R. A. MORGAN, Vermillion, So. Dak.

J. E. CRANE, Middlebury, Vt.

E. F. ATWATER, Meredian, Idaho

Annual Membership \$1.00.

Send dues to Treasurer.

Names of Bee-Keepers

TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand and arranged alphabetically (in the largest States), and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky..... 182	N. C..... 60
Ark..... 82	Kans... 350	New Mex. 54
Ala..... 80	La..... 38	Oregon... 106
Calif... 378	Mo..... 500	Ohio..... 1306
Colo... 228	Minn... 334	Penn..... 916
Canada 1200	Mich... 1770	R. I..... 46
Conn... 162	Mass... 275	S. C..... 40
Dak... 25	Md..... 94	Tenn..... 172
Del.... 18	Maine 270	Tex..... 270
Fla.... 100	Miss... 70	Utah..... 68
Ga.... 90	N. Y.... 1700	Vt..... 205
Ind.... 744	Neb.... 345	Va..... 182
Ills.... 1375	N. J.... 130	W. Va.... 178
Iowa... 800	N. H. ...158	Wash.... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich.

Comb and Extracted Honey

Write us when you have any to offer, naming your lowest price freight paid to Cincinnati. We buy every time your price justifies, and, we remit the very day the shipment arrives.

The Fred W. Muth Co.

The Busy Bee Men

51 Walnut St.

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No. 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

SAWS

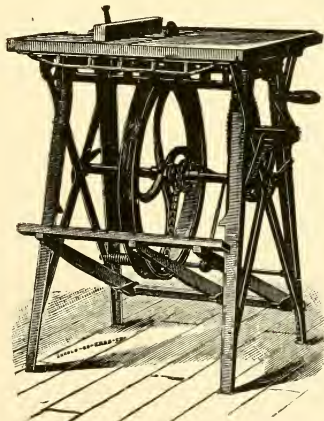
in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

381 Ruby Street

Rockford, - Illinois



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRE.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

HONEY WANTED

When you have any to offer, let US hear from you. If it is comb honey, state how it is put up and the grade; if it is extracted, mail us a sample and state your lowest price, delivered Cincinnati. We can use any amount, and are always in the market.

C. H. W. WEBER & CO.
2146 Central Avenue Cincinnati, Ohio.

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.
Jamestown, N. Y.

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

Hand's HANDSOME HUSTLERS

Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, 75c each; dozen, \$8.00. Tested, \$1.00; dozen, \$9.00. Three-frame nucleus without queen, \$3.00; $\frac{1}{2}$ -pound packages of bees, \$1.00; add price of queen wanted, etc. Send for circular.

J. E. HAND

Birmingham, Erie Co., Ohio.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

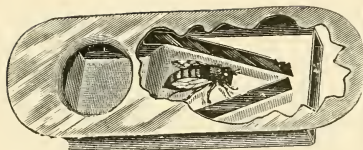
W. Z. Hutchinson, Flint, Mich.

Mott's Strain of Italians

By return mail. Untested, 65c; 6, \$3.80; 12, \$7.50. Natural Golden from Imported Stock, selected, \$1.00 each. Send for descriptive list. Leaflets, safe plans of introduction of Queens, 15c each. Leaflet plans of increase, 15c each, or copy of both for 25c. 7-10-11

E. E. MOTT, Glenwood, Mich.

Wanted Clover or raspberry extracted honey in 60 lb. cans. Mail us average sample and give us prices. 8-10-21
ALBERT G. HANN, Pittstown, New Jersey.



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

Only 25c Per Case.

60-lb. empty tins, two to a case, used but once, as good as new.

C. H. W. WEBER & CO., Cincinnati, Ohio

6-10-1f

Marshfield Sections,

Until further notice, \$4.00 per 1000 for No. 1. Best Dove-tailed Hives, with Colorado covers. 8-frame, \$1.35 each; 10-frame, \$1.45 each. All other supplies as cheap. Berry baskets and crates kept in stock. Catalogue free. Address the Supply Man of Central Michigan. 2-10-1f

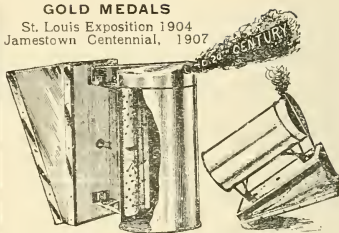
W. D. SOPER, Jackson, Mich.



If you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

GOLD MEDALS

St. Louis Exposition 1904
Jamestown Centennial, 1907



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is in one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Price \$1.00; two \$1.60, by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2.00.

We sell Danzenbaker hives and supers with **metal propolis shields**, and anything in **bee supplies at factory prices**.

Send your address and B—friends, for catalogs.

F. DANZENBAKER, Norfolk, Va.

6-10-1f

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press. In a trade recently made, I have come into possession of a letter copying press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.



FOR SALE—It will pay to get our special proposition
A. G. WOODMAN CO., Grand Rapids, Mich.

are our specialty. We furnish such extensive bee keepers as **E. D. Townsend** and others. Consider getting your bees into Protection Hives this fall. Give us list of goods wanted.

A. G. WOODMAN CO.



The Great Willow Herb in Full Bloom.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, SEPTEMBER 1, 1910.

NO. 9

The Great Willow Herb of Northern Michigan, And its Wonderful Honey Yields.

W. Z. HUTCHINSON.

THERE is no plant with which I am acquainted that furnishes more honey in a season than the great willow herb, or *epilobium*. It is a species of fire weed that springs up after the ground has been burned over in some portions of Northern Michigan; and, also, I believe in Northern Wisconsin. I have never seen this plant further south than Tuscola county, Michigan, and I never saw it in greater quantities than I saw it there (the photo for the frontispiece was taken there) yet it yielded not one pound of honey. I presume that it was really out of its *habitat*; that the northern soil and climate were needed to enable it to yield honey. Usually it lasts only about three years, when other plants crowd it out. It would be possible in May or June to select a location which would furnish willow herb that year, and bees might be moved to that locality, but no one should locate permanently with the expectations of securing a yield from willow herb every year. If he does he is likely to be disappointed. If it were

permanent, like basswood, berries or clover, a bee keeper could locate near it and have a bonanza. My brother Elmer had some colonies that stored over 250 pounds, each, last year, from this source, and he has a lot of them now (Aug. 6) that are tiered up four supers high, and the flow will last until frost comes. Another peculiarity of this plant is that it yields honey at times, or during such weather, as would put a stop to all storing with basswood or clover. I have seen the bees bringing in honey at a pretty fair rate, with a cold wind blowing from the north; and to show how it can yield when conditions are favorable, let me relate a little incident: Two men moved a load of bees to a willow herb district that they might profit by its bounteous honey flow. They reached their destination about eleven o'clock, set off the hives and opened them up. When ready to start for home, between one and two o'clock, one of them, in a joking way, said he believed he would open one of the upper stories and see

how much honey had been gathered. To his astonishment, there were *several pounds* in the central combs; and the two men hustled for home, and worked all night packing up another load of bees to take the next day. My brother Elmer says he has known the flow to be so abundant that a small drop of nectar might be seen at the base of each petal. We will probably get a crop from this source next year, and then it may be a dozen years before we get any more to amount to anything—not until another great fire sweeps over the country.

This plant grows from two to six feet in height, and, as a rule, inclines to a single stalk. In fact, it reminds me of the phlox of the flower garden. One peculiarity of the bloom is that it lasts from the middle of July until cut down by the frost. So long as it is in bloom there seems to be a cluster of buds pushing themselves up from the center of the bloom. As these buds unfold, others take their places, and so the stalk pushes up and up, always tipped with a sprig of buds, below which is a cluster of bloom that in time gives way to seed-pods that eventually burst open and scatter to the winds seed like thistle down. Thus we have on the same stalk, buds, blossoms and seed-pods; and, in many instances, the oldest seed-pods have burst and are scattering their downy seeds far and near. I think such seeds might be carried in great numbers—well, perhaps, hundreds of miles. My brother Elmer tells me that one day last fall, when the sun was shining brightly, he could see the willow herb seeds floating as high up in the air as the eye could reach; and the air seemed literally filled with seeds, white and glistening. Perhaps this explains why it springs up, apparently in a spontaneous manner, after the ground has been burned over by fires; whereas, the fire simply burns off the leaves or turf, and furnishes a seed-bed for the wandering seed.

The honey from willow herb is the whitest and sweetest honey I have ever

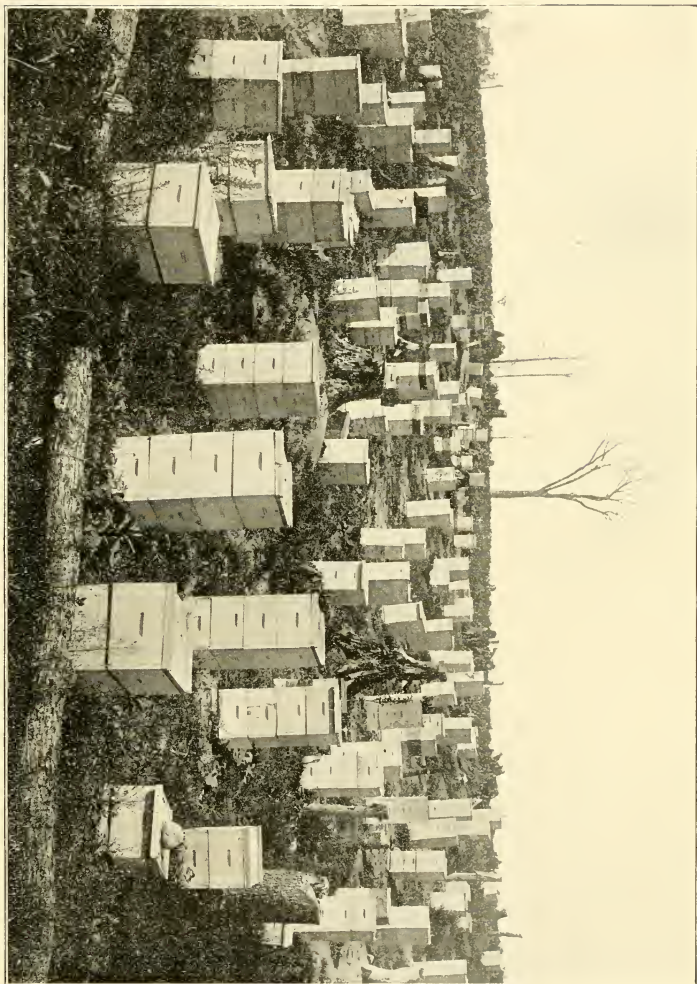
tasted. The flavor is not very pronounced, but has a suggestion of spiciness. Only a bee keeper can realize how much real, downright pleasure I experience in working in such an apiary



A Sprig of Willow Herb in Bloom.

as is shown on the opposite page—extracting the honey, storing it away in the bright, new, tin cans, and sending it off to tickle the palates of our far-away customers.

FLINT, Mich., Aug. 6, 1910.



An Apiary in Northern Michigan During a Flow from Willow Herb.

Abnormally High Prices Curtail Consumption and Destroy the Demand.

J. E. CRANE.



EDITOR Review:—I have noticed of late that you have been talking up the price of honey, or more correctly, writing it up. There are, perhaps, few things that would

please the rank and file of bee keepers all over our land more than higher prices for the products of their apiaries. It may be very well today that the price is not as high as it ought to be, that we have reason to believe that it will be higher presently, etc., but it seems to me unwise to urge producers to ask higher prices at present.

I believe that the price of honey, like all other rural products, will depend very much on the supply and demand; and I believe still farther, that too high a price is not only a great disadvantage to the dealer, but also to the producer. If the price for honey should be so high that much is carried over, it (comb honey) is almost sure to deteriorate, and then be sold, to the disgust of most persons who attempt to use it. I am not sure but the use of old, granulated comb honey has done more to give the impression that it was adulterated than anything else, and thus prejudice people against the use of it. I know of no way of judging of the future, except by the past. We must "be guided by the lamp of experience." Let me give a few illustrations:

HIGH PRICES CAUSED HONEY TO SELL SO SLOWLY THAT IT WAS CARRIED OVER, MUCH DETERIORATED.

Some 20 years ago, there was a rather light crop of honey in the country, and in

the fall the price began to go up. "Hold on to your honey," was the cry of the American Bee Journal, "and you are sure to get high prices." Every week, nearly, the price was quoted still higher. I made up a small carload and shipped it to Chicago, where prices were the highest. It reached its destination while prices were yet high, but it sold very slowly. While prices remained very high through the winter, very little was sold; and much of my honey was *carried over* till the next season and sold at a *low* figure.

I dropped the American Bee Journal, every number of which I had taken, and have never taken it since. It was no longer the "old reliable" for me, but a false prophet instead.

Some eight or nine years ago I sent my honey to Chicago; this time selling outright to Mr. Burnett. It was a fancy lot of honey, and he asked a fancy price for it; but it sold slowly. Early the next spring I received a letter from an unknown friend, asking if Mr. Burnett was selling this lot of honey on commission, saying that he did not believe Burnett would be able to close it out at the prices he asked. I replied, thanking him for his interest, but told him that Mr. Burnett had an undoubted right to ask what he liked, as I had sold outright, and had no interest in it farther than that I hoped Mr. Burnett would do well with it. Well, he *did* fail to sell it out in season, and, I believe shipped a part of it to our eastern markets to get it off his hands.

ATTEMPTING TO "CORNER" THE MARKET LED TO LOSS.

But let no one think that Chicago has a monopoly of this sort of thing. Seven years ago, I think it was, a Boston dealer wanted to control the market on Vermont honey, and bought up a large por-

tion of it, paying the producers some 16 cents for it. In order to make a fair profit he must sell at 18 cents, wholesale, as freight, cartage and insurance would take one cent. What was the result? An immense quantity was carried over till the next year, to the loss of the wholesale dealers. A large amount of honey, much of it granulated, or "weeping," was to be sold the following year, to the disgust of those who bought it and used it; besides it would compete with the new crop and tend to lower the price for that crop also.

TOO HIGH A PRICE A GREATER EVIL THAN
TOO LOW A PRICE.

Of two evils, I believe too high a price is a greater evil than too low prices. If honey sells too low, the producer, for the time being, gets a little less money out of it, but it has the advantage that many use honey who would not otherwise do so; and, doubtless, many who have never tasted it do so and become consumers. The markets are cleaned up, and when the new crop arrives, it sells promptly at good prices.

But if the price is too high, a train of evils follow, as I have already stated; loss of profit to both commission men and producer, as well as slow trade to the retailer, and, worse than all else, the holding of honey till it deteriorates and injures the reputation of our product, more than most of us imagine. When the consumer actually finds grains of sugar in his honey, it is of little use to tell him or her that it is not adulterated. Don't they *know*? The average person knows nothing of the difference between cane sugar and that found in honey.

SOME REASONS WHY THE CONSUMER PAYS A
HIGH PRICE.

Take the best grades of extracted honey. These have been sold the past year for seven and eight cents. Does any producer stop to think what such honey costs the consumer? Suppose we pay eight cents for choice extracted honey for bottling. It figures out about as follows:

1 lb. extracted honey	-	-	8c
Freight on same	-	-	$\frac{3}{4}$ c
Bottle	-	-	$4\frac{1}{4}$ c
Freight to jobber	-	-	1c
Cost of selling to jobber	-	-	$\frac{1}{2}$ c
Labels, cost of bottling, etc	-	-	$\frac{1}{2}$ c
Jobber's commission	-	-	2c
Retailer's profit	-	-	5c
Total	-	-	22c

I have said nothing of broken glass or defective bottles, of which there are always some, and sometimes *many* in each gross. One lot of No. 25 bottles we bought had, I think, from $\frac{1}{4}$ to $\frac{1}{2}$ of each case broken. Of course, if we buy our glass in carload lots it will be somewhat less, but it takes lots of money to buy a half dozen kinds of glass in car lots.

In the above estimate I have said nothing of the loss from leakage, and waste from leaky barrels, or tin cans with nail holes in them, as we found one today with a loss of many pounds of honey. Nor have I counted anything for the one who puts up the honey, which should be not less than that of the jobber, who simply turns it over to his customers. This would make the actual cost to the consumer of 24 cents per pound. It seems as though it ought not to be so much, but how can the bottler do it for less, unless he uses a poor grade of honey? Besides this, the price of containers has gone up. Some of the glass we bought last year has advanced over 35 per cent. On a lot of a thousand tin, quart cans ordered recently we find an advance of nearly 25 per cent. Now, if the price of honey goes up, where can we sell our honey? Who will want to retail it if it goes higher?

THE PURE FOOD LEGISLATION MAY HELP
TO RAISE PRICES.

Some one says that the new pure food law is going to increase the demand. Now, I really don't know much about the prices which this so-called adulterated honey has sold for, but I think it safe to say the price has been low, as is the case with the corn syrup, falsely

so-called, and can we expect those who have been buying cheap honey to pay at once high prices for the best grades of honey? They may, and doubtless will, take our cheaper grades of honey, and thus relieve our market from such undesirable competition. I doubt if the new laws will at once raise the prices of honey, although I expect they will after a time.

I have been watching with a good deal of interest to see what effect the new pure food law has upon maple sugar and syrup. Maple sweets have probably been adulterated even more than honey. Vermont is one of the largest producers of maple sweets. The 1st of April, when it looked as though there would be a short crop, the price went up higher than I ever knew it to go, but a month later, when it had been found that a large crop had been secured, the price dropped even below that of the past two years; and, I am told, would have gone even lower, but for the fact that much of it was contracted early in the season. It seems to be a question of supply and demand. I believe that, eventually, the price of such sugar and syrup will be much higher as a result of our new laws, but it comes slow.

In 1869 the wholesale price of choice white honey in New York was 50 cents a pound, but the amount of such honey in that market was very small, and the prices of most things were higher in those days. Tons of honey are now sent to our larger towns where formerly hundreds were sent. The honey crop now-a-days is estimated by the number of car load each state can ship out.

I believe the true way and the best way is to *increase the consumption* in every legitimate way, even if we have to take low prices, or even give it away at first; and with increased demand will come better prices. Let us have the demand and the prices will come without our worrying about it. An *active* market is of even more importance than high prices. Let us work for *that*.

I am reminded in this connection of a story that the late D. W. Quinby of New York (Brother of Moses Quinby) once told me, some thirty years ago. He ran a commission store, and was a shrewd but strictly honest man of the old style. He said that once on Thanksgiving week there was a large amount of turkeys consigned to the various houses. The poultry arrived on Monday. On Tuesday they were ready for trade. Most of the houses held their turkeys at 26 cents. Instead of asking this price, he put the price on his consignments at 18 cents, with the result that at noon his turkeys were all sold, and he spent the afternoon making out returns to his shippers. The next day it rained. The next day was Thanksgiving day. A day later no one wanted turkeys, and those who were asking 26 cents on Tuesday were glad to get 6 cents—at least, some of them. "I knowed" Mr. Quinby used to say, in a very knowing way, as he would light his pipe with a parlor match, take a whiff or two, and then talk till it went out and then light up again. And he "knowed" that the price goods would command depended very much upon the amount to be sold and he did business in that way.

MIDDLEBURY, Vt. July 26, 1910.

[Considering that the Review is striving to help its readers to dispose of their honey crops to the best advantage, it may surprise some of them that it should make room for an article expressing such views as those found in the foregoing article; but the Review is always ready to give all sides a hearing, and to consider all factors having a bearing upon the problem to be solved. Not only this, but I believe there is much *truth* in the views as set forth by Mr. Crane. When the price of a luxury, like honey, is forced upward until consumption is curtailed, there is, eventually, loss instead of gain. Mr. Crane truly says that a brisk market at a fair price is more desirable than a slow market at a high price. Particularly is this true with

a perishable product like comb honey.

I, too, can remember, 25 years ago; when extracted honey sold for more than it does now, but sold, oh, so slowly! It might not have been the higher prices that caused the slower sale at that time, probably it was not, but let the cause be what it may, it enables me to compare slow sales and high prices with quick sales and lower prices. I never could have launched out and established out-apiaries, and produced thousands of pounds of extracted honey, had not there been a change in the demand for honey.

According to the estimate furnished by Bro. Crane, the consumer is certainly paying all that he can afford for a pound of extracted honey in glass, but it does seem a pity, as though something was

wrong, when it costs twice as much to put a pound of honey into the consumer's hands as it does to produce the honey. The consumer ought not to pay any more, but the expense of getting it to him ought to be cut some where. I should be glad to hear from those who have succeeded in placing it in the consumer's hands at a lower cost.

I get two cents more for my honey than Mr. Crane allows the producer, but I do it by finding those men who are not only actual consumers, but of that class who are able to buy in large quantities, or else they have special facilities for reaching the consumer.

This, to me, seems the most hopeful field—getting the producer and consumer closer together.—EDITOR.]



Removing Combs for Extracting Without Using Bee Escapes.

GEO. SHIBER.



IN looking over the back numbers of the Review, I notice you have printed R. F. Holterman's article from *Gleanings*, where he criticises your practice of removing

extracted honey with bee escapes. I have also read with interest your comments upon it (page 315, 1909). My first thought is, yes, and my last thought is, what in the world can one want of a bee escape in taking off extracted honey, except, perhaps, in a small way?

DON'T BE AFRAID OF ROBBERS.

It might be urged that it makes a difference whether we extract as fast as the bees begin capping, or wait until the

harvest or flow is over. No, I don't think it does. First, *we must not be afraid of any of our bees.* (Mr. Editor can I have that last sentence in italics?)

PUTTING A SMOKER IN GOOD TRIM.

We don't need to be afraid if we have a good smoker in hand, and in good trim. By good trim, I mean one that has a good bed of red hot coals in the bottom, and well filled with some lasting fuel, such as small pieces of chips from the wood-yard, or other hard wood where we can find it. Apple tree limbs, from trimmings as large as one's fingers, cut up about two inches long, make excellent fuel. Well now, fill up your smoker with this, and take a handful of grass, roll it into a ball about as large as the inside of the smoker, crowd it down upon the fuel, but don't have it too tight, shut your cover, work the bellows until you have a large volume of white, dense smoke—if you have the bed of coals in

the bottom it won't go out, and it pays to have your smoker well to going before you start. How do I get the hot coals? I usually get a spoonful or two out of the kitchen stove, if we have a fire, if not, I start the smoker fire with rotten wood, which I keep very dry.

Let's proceed now to take off honey. We will go to one of the standard hives, tiered up several stories high. Many of the hives are "Long Idea," holding thirty L. frames on the ground floor, the very best hive for extracted honey ever made—*whoa!* let's pause a moment until I catch my breath. Just at this moment I am thinking that in the 24 years in which I have been reading the bee journals, how many times, how many *million* times, I mean, have I seen the phrase "best hive in the world" printed? But, I am going to give it up; at the same time, I have a deliciously brotherly feeling for the man that likes the little contrivance which he has gotten up to make his work more pleasurable. However, the "Long Idea" hive is not new, older than the hills; and I am stuck on it.

GETTING OUT THE COMBS.

Well, now, let's get back into the main channel of our thoughts. We will open a three-story hive. Robbers? Yes, you bet; and they will rob to beat the band, if they get half a chance. The entrance is east; stand at the back or southwest corner; raise the cover quickly, and, at the same time, pour a cloud of smoke on top of frames, and, in the same breath, cover the top of the hive with a robber-cloth, preferably wet, but if water is not handy, never mind. All this is done while you are counting ten. Now, roll over your robber-cloth, exposing two or three outside combs. More smoke. Take out the outside comb, and, when nearly out of the hive, give it a good shake, and, as it is clear of the hive, rake the robber-cloth over the top of the frames with the lower corner of frame. Take a broom (I use the Coggs-shall) and give each side of the comb a swipe, when it is quickly placed in a hive-body, covered with

another robber-cloth; drop your broom when through, as it is tied to your waist, as is the hive-tool, and, with the smoker again in hand and lots of smoke (the robber-cloth holds smoke in the super) repeat the process with the next comb, and so on. The bees are brushed in front of the entrance, or inside the hive, as is the handiest, but above all things, *don't smoke the entrance*. It's seldom that I ever smoke the entrance in any hive-manipulation.

Perhaps you will say that all this takes a long time. No, you are mistaken. With the above plan your super is empty before you know it.

Maybe you will say again, robbers will dive under the robber-cloth, both over the super and in the body holding the cleared combs on the hive-cart. Before I answer this let me repeat *don't be afraid of your bees* and don't let them scare you. Of course, the bees of the hive under manipulation, are perfectly subdued, or, at least, those in the super are. It's those fellows in the air which are describing whorls and circles that will bother, if any do. Occasionally, one or two will dive under the robber-cloth. Maybe ten or dozen a will, at times, but what of it? They won't hurt you. Don't be *afraid* of them. If you have a good veil on, about the only place you can get stung is on the back of the hand, but what of that? It will prevent or cure rheumatism, so they say, and a bee can be so easily swiped off from the hand, and the sting mashed out.

A WORD ABOUT ROBBERS.

Robbers are troublesome when they are getting a little something. They do not waste much time, in large numbers, when they do not find anything. Suppose, to illustrate, that they have overpowered a weak colony. They will make things mighty exciting for an hour or two, in a large apiary, but let them rob it out, and they will quiet down all right.

I have for years piled my wet, extracted combs out under the apple trees and have never seen a particle of harm

come from such practice. The only objection is, if there is any brood disease in an incipient stage, it might scatter it, but, even in that case, the danger might not be so great.

HOW TO MAKE A ROBBER-CLOTH.

I have taken it for granted that everybody knows what a robber-cloth is. However, it will do no harm to say that

it was given to the bee keeping world years ago by our genial friend of Marengo, Ill. To make, I usually take a grain bag, rip it down the side, nail two lath on each side, at opposite edges, clinch the nails, and it's ready for business. It's about as good a contrivance as has been given to bee keepers by that very practical apiarist, Dr. C. C. Miller.

RANDOLPH, N. Y. Dec. 23, 1909.



Some Suggestions on Marketing by a Lady Specialist.

MATHILDE CANDLER.



DEAR Editor Review: Your editorial in the May Review, on selling honey, interested me ever so much; for I have been waiting for years for something of that kind to come up—something

that would begin a real and definite campaign for securing better prices and market conditions. I have attended every convention with the hope that at last something would be done. At the St. Louis convention a start was indeed made, and a committee named, but that was as far as it went. The Honey Producer's League, that was begun a few years ago, seemed to me the nucleus of a good thing, and I was sorry to see it dropped. Finally I gave up looking for any action in the matter, partly because I was doing a little better than formerly myself, and partly because I thought it was of no use anyhow.

I wish the subject would be taken up by all the bee papers; and that they would discuss and agitate the matter until we bee keepers wake up. It's up to

us. I am sure the journals have helped bee keeping very much by their continued preaching of better quality in honey production. The discussions on that subject have run through the journals a number of years, and have been talked over in conventions, until it has had some effect; and, in consequence, we are already finding a more ready market for our product. The agitation must be kept up. We must wake up.

CONTINUED USE MAKES NECESSITIES OF LUXURIES.

Luxuries we can do without; but not so with necessities; and most articles in common use, that we deem *necessities* now, were considered luxuries *once*. By common use they became necessities. Bee keeping has now reached a point where co-operative action and a united aim and interest is all that is necessary to make honey a staple product and a necessity on every table. More honey is used now than ever before. More people eat honey, and people eat more honey, and the increased consumption is due largely to the better quality.

SALESMANSHIP AN ART THAT MAY BE ACQUIRED.

But there is quality in salesmanship as well as in production. Good salesman-

ship is an art, but it is an art in which, while we may not all be equally efficient, yet each of us could improve it a little, and a little more study and effort all along the line would make a great difference indeed. Salesmanship covers a great field, and the quality of the product is only one of the factors necessary to its success.

And then, bee keepers do not take their business seriously enough. To them, bee keeping is only an avocation; a side-issue; a by-product; something on the side—it doesn't amount to so very much. This hurts us, and always will. Until we begin to feel its and our importance, until we give it the same attention in all its details, including the financial part of it, that other business concerns give to their business, we can not expect the same success that they find in their work.

GREAT THINGS MAY COME FROM SPECIALTY.

If ever the day comes when the specialist in bee keeping is supreme, there will be a better market and sale of honey. And that day will come. I believe there is more than merely a small competence to be derived from apiculture. The automobile, the telephone, the various labor- and time-saving apicultural appliances recently invented, and yet to come, will make it possible to direct bee yard work from the desk or office, and for a man, or a company of men, to own or control 10,000 colonies, and manage them more easily than he now manages 500.

Think of the advertising matter that every business concern, large or small, distributes. Bills, posters, pamphlets, circulars everywhere. Do you think another business would have such a good chance to put a nice printed label around a box or can as we have in our honey sections and cans, and not use it? Do you think the housewife wouldn't read it if it were on there? I don't, and I think it belongs there. If the section is not adapted to bearing an attractive label, descriptive of the merits of its contents,

then the section is not fit to be the receptacle for comb honey. This is a commercial age and we must use commercial methods or fall behind.

I used to stamp my name on the fancy and No. 1 sections, and always received letters from parties who wanted to buy. I did not like to compete with my own honey by sending to another party in the same town, and I replied by sending them to the commission man to whom I shipped my honey, by referring to him as my agent. Their letter I sent to the commission man. I think I secured better prices by doing so.

I now sell most of my honey outright to a jobber, and get the cash at once. I like this way, as it gives me a chance to get a little vacation and rest after the honey is gone, and before preparing for the season. I have done some mail order business. More money can be obtained for the honey that way, but I am tied to my post all the time. After the honey season is over, and everything scraped and cased, I feel pretty well used up, and need a rest and a change.

HELP FROM ADVERTISING LITERATURE.

My home market is not a large one. In a good honey year, the farmers hurt my sales a little. As a rule, people buy more honey when they know there is plenty. Then they talk about my honey, and figure out how much I am getting, and their gossiping advertises my honey. Hence, more sales.

I have used the pamphlet "Honey as a Health Food," with good success. Such circulars, or booklets, are not appreciated as they should be. Bee keepers should give them a trial. They really help, at least, I have found it so.

I did not intend, when I started, to write such a long letter, but, after I got started, I didn't know when to quit. I hope you will succeed in getting honey producers as much interested as you did with your editorial on "keeping more bees."

CASSVILLE, Wis., May 18, 1910.

A Novel Method of Holding the Smoker Which Leaves the Hands Free.

J. J. WILDER.



THE smoker is the bee keeper's most useful instrument, and being very awkward in construction is unhandy; and often no little valuable time is lost in trying to keep up with this instrument while

about the apiary work. It is so easy to get misplaced about a hive when our mind is on something else; and often, although it is set to our back or some out-of-the-way place about the hives while manipulating the frames, yet, when we reach for it, it is out of the way and we have to take our eyes off our work, and look around for it, before we can put our hands on it. Not only is it often out of the way, but often it is carelessly placed in the way, on top of the frames, or about our feet, and is knocked over and its fuel spilt or shook up, or its snout filled with earth.

The extent of our business, and the scarcity of labor, forces us to resort to every means possible to save time. We never have time to sit down or rest ourselves while manipulating frames, and the accompanying illustration shows how we hold our smoker while at apiary-work. As soon as a hive is approached, the smoker is in readiness, and the snout turned just right to send smoke over the frames by just touching the bellows. The right hand raises the cover, the left hand touches the bellows and continues the smoke until the cover is placed beside the hive out of the way. By this time the bees are usually subdued enough to begin frame-manipulation; if not, the left hand continues to touch the bellows, for

the snout is turned towards the resisting bees before the hand touches the bellows.

Our hives are placed on single stands, six and eight inches high, and we can thus keep the smoker conveniently placed while working in the second stories. While working in the supers several



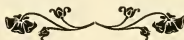
stories high I keep it thus placed, and I reach for it when it is needed, and it is always convenient.

If hives, frames, or supers are to be carried from one hive or location to another, the smoker is kept in the same

position; or, if supers of honey are to be carried out of the apiary and loaded on the wagon, the smoker is still usually kept in this same position, and does not interfere with walking but little, if any; for it has become perfectly natural for us to thus carry it.

It might be thought that it would scorch the clothing when thus placed, or might even heat up the flesh when the fuel burned down to coals, but not so; we have never had but a few slight scorches and no burns at all.

CORDELE, Ga., Jan. 14, 1910.



Instructions for Using a Cappings Melter in the Most Efficient Manner.

F. R. BEUHNE.

MR. Editor, Dear Sir:—As the inventor of the cappings melter, the working of which you describe in the Review of November 1909, I am pleased it was a success in your hands in readily disposing of all the cappings one operator could produce. I have been experimenting with melters for the last fifteen years, one of the earliest was identical with that now made by the Roots, except that it was square instead of round; but I soon discarded that and several succeeding ones.

THE REQUISITES OF A SUCCESSFUL MELTER.

The many experiments made convinced me that what was wanted was: 1, Contact of the cappings as they came off the knife with a hot metal surface for the shortest possible time sufficient to melt the wax; 2, Removal of the honey from the heat, slumgum and wax as as soon as gravitation will separate them; 3, The largest possible heating surface in the smallest compass. My melter, when operated as it should be, answers these requirements perfectly. I have one at each of my three apiaries, and the honey runs from the elbow tube direct to the honey tank, and is in no way impaired in flavor or color "if" the elbow tube is set so that only a very small quantity of it is in the tray. As uncapping proceeds, wax and slumgum accumulate; and as wax is much lighter

than either honey or slumgum, it does not displace honey to quite the extent of its volume, therefore it rises till it reaches the lower wax outlet, from which it overflows perfectly clean. If the cappings contain much slumgum it collects in a layer between honey and wax, and, as the amount increases, it also reaches the level of the lower wax stud which is then closed with a cork, when, after a little while, the wax will overflow from the upper outlet. It is all simply a question of giving the elbow tube the correct slant, so that a minimum of honey will be in the tray, and yet no slumgum must escape with it.

The object of the square tubes is to cut the sheet of cappings into strips as it falls crossways upon the tubes; the top edges melting through, when the adhering honey runs away from the wax, down the inclined surfaces, and thus brings the wax in contact with the hot tube. The surface of the one-inch tubes is, of course, four inches; and the heating surface is, therefore, nearly four times the area of the square of the gird of tubes.

The tray should be raised on two pieces of wood to bring it up as near as possible to the underside of the tubes, the heat radiating from which, melts any strips of wax which may have slipped through, while, at the same time, the bottom of the tray is kept from contact

with the hot surface on which it would otherwise rest.

A MELTER OUGHT TO BE ENCLOSED TO
RETAIN THE HEAT.

Looking at your illustration of my melter, I notice that the tubes run lengthwise of the tray instead of across. Also that the whole apparatus is not covered or encased in anything; and, therefore, I am not surprised that it takes two burners to keep it going; and that the heat radiating from the melter and the stove must be enough to partly roast the operator. With the thermometer at 100° in the shade, as we often have it here in summer, it would be well nigh impossible to work as you do.



I enclose a print which shows how my melter is rigged up at the home apiary. It is encased in wood all around, except at the bottom. It can be heated with steam by means of a flat steam chest suspended inside the lower part of the apparatus, or it can be heated, when

extracting at the rate of 150 to 200 pounds an hour; with only a large Rochester lamp with steel chimney. As no heat is lost by radiation, there is no discomfort whatever to the operator, and much less heat is required, because none is wasted.

HEATING A MELTER WITH STEAM BROUGHT
THROUGH A RUBBER HOSE.

The steam, which is obtained from a small boiler (without pressure) does not enter the water in the melter, but heats it by contact through the metal of the steam chest. The condensed water returns to the boiler by gravitation.

This may seem complicated, but it is really an extremely simple arrangement, and, as you use a steam heated honey knife, why not have a somewhat larger steam generator, which would heat both melter and knife and could be yards away from the operator, even in another room?

TOOBORAC, Australia, June 10, 1910.

[I can readily see that enclosing a melter to retain the heat would be a great improvement. It would save fuel, and also the operator from much discomfort.

I don't feel so sure about the advisability of separating the honey and wax inside the melter. It would certainly subject the honey to the heat much longer than to allow honey and wax to escape at once into a gravity separator.

It must not be forgotten, however, that with our management we secure very thick combs, thus uncapping very deep, which throws an unusual amount of honey and wax into the melter. A melter and arrangements that would work perfectly as bee keepers usually uncapped, would soon be "swamped" with our great slabs of cappings; especially when they drop as rapidly as they do from our steam heated knife.

But the enclosing of the melter is a good feature, and we shall certainly adopt it.—EDITOR.]



EDITORIAL

A Four-Dollars-a-Day man ought not to spend his time doing the work of a two-dollars-a-day man.

Continued Illness of the editor makes the Review late, also accounts for the lack of editorial matter.

The Man who will work out some easy, cheap, yet desirable plan for requeening an apiary each year, will be a benefactor to bee keeping.

The Michigan State bee keepers' association, now with over 200 members in good standing, will hold its annual convention in Grand Rapids, Nov. 9th and 10th. Full particulars later.

Two Wheel Barrows used for wheeling honey into the honey house for extracting, allows one of them to remain in the house while the other is being filled in the yard, thus the saving of unloading each time the "outside man" comes in with a load.

Honey Strainers are not needed if the honey can stand in large tanks until the pieces of wax, etc. rise to the top. If a bee keeper had two, 50-gallon tanks, so that he could run the honey into one while that in the other was "settling," he would need no strainer.

The Jones method of preventing swarming received considerable publicity last year. I don't know to what extent it was tried. Some objected to the disagreeable work of uncapping the brood; but a Florida subscriber says this may be avoided by sprinkling dry sulphur over the combs. This will kill all *unsealed* brood, but not injure the sealed brood, which would be more desirable than uncapping sealed brood, and accomplish the same result.

The Inspector of apiaries for Michigan is henceforth to receive \$5.00 a day for his services, instead of only \$3.00, as heretofore. Inspection is hard, disagreeable work, and the man who leaves his own work to perform this, is entitled to generous compensation, and \$5.00 is none too much.

Propolis poisons one of my subscribers and causes him much suffering. He writes me for a remedy. The only suggestion that I can make is that he wear gloves. Of course, they are a little bungling, but would certainly remedy the trouble. Has any one else a better plan?

The Bartlett method of treating foul brood failed with Mr. W. E. Conklin, of Blairstown, N. J. He tried it on two colonies. In one the queen found her way up through the queen excluder, and, in the other the bees neglected the queen in the lower hive, and went on rearing queens in the upper hive.

Paper Honey Jars.

One of the greatest drawbacks in the putting up of extracted honey for the retail trade, is the cost of small packages; but, at last, we have something that is decidedly low in price—jars made of thick, heavy paraffined paper. They are slightly conical in shape, and paper discs are used for stoppers the same as they are used in milk bottles. Walter S. Pouder, of Indianapolis, Indiana, is the distributing agent for the manufacturer, and has sent me some samples, and a circular from which I quote the following:

Every bee keeper who produces extracted honey, and keepers of retail stores, will at once be interested in this new honey package. It is neat, does not leak, is especially desirable for granulated honey, as jars can be filled, and after granulation takes place the con-

sumer can remove the paper bottle, thus leaving a beautiful cone of granulated honey ready for the table. Such packages are not affected by the moisture, regardless of any damp climate. The bee keeper can deliver his honey from house to house without the annoyance of exchanging containers, and dealers and stand keepers will make many additional sales by providing a container free of charge. The jars can be labeled or a rubber stamp can be used. After experimenting with different patterns of this ware I have given this the preference on account of its being the most substantial, serviceable and securely made. The shape of the jar means the greatest possible strength for amount of material used.

The prices are as follows: quarts, \$1.00 a 100 or \$9.00 a 1,000; pints, 90 cts. a 100, or \$8.00 a 1,000; half pints, 80 cts. a 100, or \$7.00 a 1,000. A sample dozen, any size, or assorted sizes, will be sent by express for 25 cts.—charges not paid.



Program of the National Bee Keeper's Association.

The National Bee Keeper's Association will hold its annual convention October 12th and 13th, in the Common Council Chamber, in the City Hall, Albany, New York.

There will be five sessions, beginning with the first on the 12th, at 10:30 a. m., an afternoon and evening session, and a morning and afternoon session on the second day, during which the following program will be taken up.

The papers selected are to take up not more than five minutes each, so that there will be sufficient time for discussion of the subjects; and also allowing ample time for the "Question Box," which is to be taken up at the conclusion of the subjects on the regular program at each session.

OCTOBER 12, MORNING SESSION, 10:30 A. M.

The first session will open with the reception of members, paying of dues, and such other matters, so these will not interfere after the regular program is taken up.

"Bee Keeping as a Business," F. B. Cavanagh, Hebron, Ind.

"What a Woman Can Do With Bees," Mrs. S. Wilbur Frey, Sand Lake, Mich.

OCTOBER 12, AFTERNOON SESSION, 2 P. M.

"Comb Honey—from Nectar to Market," S. D. House, Camillus, N. Y.

"Extracted Honey—from Nectar to Market," J. L. Byer, Mt. Joy, Ont. Can.

"Bulk Comb Honey and its Future," Louis H. Scholl, New Braunfels, Texas.

"Ripening Honey on the Hives," W. P. Southworth, Salix, Iowa.

OCTOBER 12, EVENING SESSION, 8 P. M.

"President's Address," Geo. W. York, Chicago, Ill.

"Selection in Breeding to Increase the Honey Crop," Geo. B. Howe, Black River, N. Y.

"Co-operation Among Bee Keepers—Advantages and Procedure," Frank Rauchfuss, Denver, Colo.

OCTOBER 13, MORNING SESSION, 8 A. M.

"Advertising to Create a Larger Demand for Honey," F. J. Root, Newark, N. J.

"Methods of Retailing Honey," Wesley Foster, Boulder, Colo.

"Shipping and Grading Honey," H. H. Root, Medina, Ohio.

"Methods of Rendering Beeswax," H. R. Boardman, Collins, Ohio.

OCTOBER 13, AFTERNOON SESSION, 2 P. M.

"When and How to Requeen with a Fall Honey Fall," F. H. Cyrenius, Oswego, N. Y.

"Southern Honey Production—Present Conditions and Future Possibilities," J. J. Wilder, Cordele, Ga.

"Bee Keeping in Maryland, as I See It," N. W. Saunders, State Entomologist, Rockville, Md.

"Question Box" after each session.

LOUIS H. SCHOLL, Secretary.



A 50,000-Colony Bee Company.

For, lo, these many years, has the Review preached the doctrine of "keeping more bees," but even in its wildest en-

thusiasm it has never dreamed of anything so magnificent as the project outlined in *Gleanings*.

Mr. Root:—The above company has been incorporated in the state of New York, and on July 15 will start their first apiary of 1,000 colonies at Kingston, Jamaica, W. I. It is the intention of the company to increase to 50,000 colonies. The Board of Directors are: J. S. Charlton, New York, President; A. B. Peters, Brooklyn, N. Y., Secretary and Treasurer; W. C. Morris, Yonkers, N. Y., Theodore Hess, Patterson, N. J., and Herman Neubert, Brooklyn, N. Y. The field work will be under the personal direction of W. C. Morris, the Yonkers bee keeper. A large bottling plant will be established in New York, and the product sold direct to the grocery trade. Agencies have been established in England and Germany. Any other information will be furnished by

A. B. PETERS, Sec.

After reading the foregoing I wrote to Mr. Morris, asking for particulars, and received the following letter accompanied by the portrait of the author, which I reproduce.

YONKERS, N. Y. June 21. 1910

Friend Hutchinson:—Yours to hand in regard to American Bee Products Co. I am one of the five directors of the company. It is a stock company, incorporated



under the laws of the state of New York. I will probably leave for Jamaica sometime in July, buy 250 colonies of bees, and send from home 1,000 ten-frame two-story hives; and every thing needed for an up-to-date apiary. I will increase to 1,000

colonies by Dec. 1. After the flow is over I will increase to 3,000 the second year, and continue to increase one to three, until we have 50,000 colonies; which we hope to have in five years time.

I am to have full charge of the field-work; in fact, I am the only practical bee man in the company, and I have been at the business only four years, but have made a good living at it for the past two years. I have a business now paying about \$5,000 a year.

I suppose you would like to know my plans, but, although I have laid out just what I intend to do, local conditions may change my plans.

As already stated, I have been in the bee business only four years. Although I had over 100 colonies last year, and more than 200 this year, I have had no swarms. So far as I am concerned, I am not interested in non-swarmer devices. I started with one colony, increased to six. The second year I increased the six to sixteen, then the next year increased one to twenty in a season. I increased on August first, last year, two to ten, wintered them, and sold the ten on May first at \$10.00 per colony. I sold 108 colonies last year, and, so far this year, 87, at an average price of about \$10.00 per colony.

I have read everything published in English on bees, and tested by actual experience everything that looked good to me. I have visited most of the prominent New York state apiaries, Alexander and others, and, although this venture may look big to some people, and I believe at least one of the bee journals will give me a dig, you can't, as you have been preaching "more bees;" and these fellows who say "it can't be did" will have to crawl into their hole.

I am going to establish these 50 yards, with 1,000 colonies in a yard if possible; and will have more than 50 yards if necessary, with an absolutely perfect organization and system. With a capable manager for each yard, 50,000 colonies will be no harder to run than 500. You see, I am going somewhat slowly in this matter, and will not start the total amount until the fifth year.

We will also start a large bottling plant in New York City, and sell direct to the New York City grocery trade. We may start in Aug. 1. If we do, we will need several carloads of honey.

While I believe in keeping bees in large numbers, I don't feel very hopeful regarding the success of this undertaking. His portrait shows Mr. Morris to be a bright man, and four years will enable one to learn quite a little about bee keeping, but the conditions in Jamaica are so different from those of New York, that this experience does not count for so very much. Another serious difficulty is that of securing 50 men, each competent to manage 1,000 colonies. Of course, the project may succeed; I sincerely hope that it will; but it strikes

me that a man who can increase one colony to 20, in a season, in New York, and sell the increase at \$10.00 per colony, does not need to go to Jamaica to find a bonanza.



Getting Extracting Combs Cleaned Up.

Most producers of extracted honey believe it necessary to have their extracting combs cleaned up by the bees at the close of the season. Some practice the plan of putting them back on the hives, and others stack up the hives of combs out of doors, or else allow the bees access to the combs while stored in the honey house.

With only a few supers, the placing of them on the hives and their removal does not amount to a great deal in the way of labor, but when a man has 1,000 supers of combs to handle, the task assumes some proportions. Even carrying them out into the yard and bringing them in again is no slight task. Allowing the bees access to the honey house where the combs are stored, saves all labor of handling.

Right here allow me to ask: Is the cleaning up of these combs really necessary? Is anything gained by the practice? It might be answered that the honey is saved. Yes, the honey is *removed*, but is it removed at a profit? Isn't the excitement, and commotion, and demoralization in the apiary, at a time when the bees ought to be quieting down for winter, more damage than the worth of the honey? Perhaps the excitement causes the consumption of as much honey as is secured.

The combs will keep over winter just as well without this cleaning out. When placed on the hives in the spring the bees will clean them out the first thing that they do. Of course, the honey will candy, and the bees will consume very little of it when they find it in this condition, but they will dig it out and kick it out of the hive if they don't use it. If any one knows of any good reason why these combs ought to be cleaned up at

the end of the season, let me hear from him.

Right here comes up another point: If the combs are not to be cleaned, if the honey that adheres to the cells after their removal from the extractor is really lost, then this is a big argument for the use of a power-driven extractor; as it leaves the combs much cleaner than it is possible to clean them in turning the extractor by hand.



Samples of Brood Diseases Desired.

Prof. Phillips, in charge of apiculture at Washington, D. C., is anxious to receive samples of brood diseases from all parts of the United States, so he may know more accurately where they occur. The information is of great help in sending out information concerning the treatment of diseases. The department is sending out the following notice:

The Bureau of Entomology desires to obtain information concerning the prevalence of brood diseases of bees in all parts of the United States. If either American foul brood or European foul brood occurs in your vicinity, or if there is any disease of the brood which is not understood, we should like to know it.

In view of the fact that these diseases are not always correctly diagnosed, it is very desirable for us to obtain a sample of the brood for bacteriological examination. If there is any disease of the brood in your own apiary, or near you, we shall appreciate it if you will send us a sample.

In order that samples may reach us in good condition, it is desirable that a piece at least three inches square be cut from the brood combs and then kept in a dry place for a day or two before putting in the box to mail. Samples should be sent in tin or wooden boxes. Such a box will be sent free on request with franks for mailing so that no postage will be necessary. Please put your name and address on all samples sent in. Results of the examinations will be sent out as soon as possible.

This information is desired for the purpose of sending out publications on these diseases to bee keepers whose bees are in danger from disease, and in helping with the eradication of disease in any way possible. The name of the individual sending the samples is not made known to other bee keepers in the

vicinity. Any information that will help us in combating these diseases will be appreciated, and will be a benefit to the bee keeping industry. Your co-operation is requested.

Respectfully,

E. F. PHILLIPS,
In Charge of Apiculture.



Extracted Versus Comb Honey Production.

This subject has been discussed pro and con in the journals many times, and the decision seems to be that all depends upon circumstances. Of course, there are instances in which either kind may be produced to advantage, and there is really little choice. In such cases it is largely a matter of taste on the part of the bee keeper. I think my friend Fred W. Lesser, of East Syracuse, N. Y., must be thus fortunately situated, judging from the following that I copy from a recent letter of his. He says:

I have secured a fair crop of honey—60 to 80 pounds per colony, extracted, from 500 colonies. I could have taken double that if I had taken proper care of the bees in the cool weather of June. I fed about 600 pounds of sugar, when it ought to have been 4,000, or more, to have kept them breeding.

Do you still prefer to produce extracted honey instead of comb? The only advantage that it has, in my opinion, is that the bees don't swarm. The disadvantages are many—harder work, crosser bees, poorer condition for winter, no increase, bad when disease is around, poor markets, and very little more honey than when working for comb. I am going more for comb; and I often wonder why you ever took to extracted even if you manage to sell it at ten cents. I believe that a man gets more pleasure out of the business when working for comb honey.

I will admit that foul brood is much more easily managed when working for comb honey, but, aside from this, the advantages that my friend mentions do not appeal to me. As extracted honey is *usually* produced, there is more, and harder yard-work than when producing comb honey. The shaking and brushing

of bees in the hot sun is hard work, and makes cross bees, but we don't do it that way. We have sufficient supers and empty combs to hold our entire crop, and simply stack up the supers until the harvest is over. This isn't hard work, and does not make cross bees. Then we take off the honey with bee escapes, and this does not make cross bees. We can take off an entire crop without the bees realizing what is going on. It is wheeled into the honey house entirely free from bees, warmed up and extracted at our leisure—no bees buzzing around our ears and diving into the honey.

I have produced both comb and extracted honey, and I can't see much difference in the colonies at the end of the season. When there are drawn combs in the supers, there is greater attraction there to store honey, but, if the colonies are short of stores in the fall, that is, shorter than when producing comb honey, I think it comes from extracting combs out of the brood nest. We never extract from the brood nest, and, if any are lacking in stores in the fall, we feed them and that ends it. So far as the strength of colonies in the fall is concerned, I don't see that there is an advantage on either side. To be sure, there is not much increase when working for extracted honey, but it is an easy matter to make any increase that is desired.

There was a time when extracted honey was of slow sale, but that time has passed. First-class extracted honey is now as salable as so much wheat.

If the bees are compelled to build their combs in which to store their surplus, they may store almost as much comb as extracted honey, but with plenty of empty combs, I have always secured a decidedly larger yield of extracted honey. I believe that is the usual experience.

As to which kind of honey a man most enjoys the production, I should say that it depended upon the man's tastes. The production of comb honey is a delightful,

beautiful occupation. To produce the clean, smooth sections of honey, in all of their virgin whiteness, crate them up in tidy cases, and stack them up in showy piles, appeals to the love of the beautiful in any man.

The filling and stacking up of piles of new, shiny, tin cans, filled to the brim with the thick, rich, ambrosial product of the apiary is not entirely devoid of enthusiasm.

I have not said much of the advantages of the production of extracted honey, but there is one important point upon which not much has been said, and that is, that a fair crop of extracted honey may sometimes be secured when not much marketable comb honey would have been stored. Even a slight flow may be secured in the extracted form, while it requires quite a bountiful flow to make much headway in sections.

Selected Articles.

AND EDITORIAL COMMENTS.

CLEANING EXTRACTING COMBS.

How it may be Accomplished at the end of the Season Without any Fighting or Difficulty.

I am not certain that extracting combs need cleaning up by the bees at the end of the season. Partly finished sections that are to be used for bait-combs the following year, must be cleared of honey, otherwise it will candy, and, when given to the bees, they will store new honey over it.

Of course, the combs must be cleaned by the bees, but exactly what way to allow them access is sometimes difficult to decide. G. C. Greiner gives his plan in *Gleanings*, and it strikes me as an excellent method if the combs are to be cleaned. Mr. Greiner says:

This is an old subject, discussed and talked about time and again; but I believe there are some points connected with it that have never been mentioned.

To prevent the gnawing of combs, one of our prominent writers, advises reducing the entrance to a single bee-space. This may have the desired effect; but, in my opinion, there is a better way to accomplish the same result, but in an opposite direction. The small-entrance plan seems faulty in more than one respect.

We are told to reduce the entrance to guard against robbing. How can we expect that the same device can be a protection in one place, keeping robbers out, when at the same time, only a few steps from it, we make it as inviting as we can to coax robbers in? Isn't this a little inconsistent?

Then the small passage causes a terrible jam. It is a continual crowding and fighting to see which will be first, either going in or coming out. The wear and tear of bee life in trying to get at the tempting sweet is entirely needless. A little different method will prevent all this trouble.

Again, the reduced entrance greatly delays the job. What is the object in prolonging the anxiety and efforts when the whole business can be done in less than two hours' time without the least crowding or fighting among the bees?

Another unpleasant feature in connection with small passages is the excited condition of the bees; they will sting everybody, far and near, if they have to fight to get at exposed honey, and they are all the more excitable if this work has been delayed until all natural sources have ceased to yield honey.

The plan I have followed for years is something like this: When I strip my colonies of all their supers at the final ending of the honey season, which is generally during the fore part of October, these supers are taken, one after another, directly from the hive to the honey house, and extracted. They are then stacked up as high as I can reach, in rows, on the west side of my bee yard.

All my hives face the east, so that the supers are placed, as you might say, behind the bees. Every first or bottom super is set on a hive-stand with the hive-bottom in its proper place; and every entrance so formed (all supers with regular hive-bottoms are perfect hives) is securely closed, using one of the sawed-out rabbit-strips as an entrance block. The bait sections are sorted out as soon as possible, and stacked in like manner after all capped honey they contain is scratched with an uncapping comb.

During the accumulation of supers all bee-stacks are kept perfectly tight, and covered. Not a bee is allowed to get a taste until all combs, baits and extracting are ready for the cleaning. I select the first pleasant, warm day; and, if there is still a little fall honey coming in, all the better. I wait till about three o'clock; then I open the whole outfit from top to bottom, except the crack between the two lower supers and the regular hive-entrance at the bottom. This latter I keep closed, for I do not wish to show my bees the way that might lead them into mischief later on. All openings are either at the back or higher up, where they could not find an entrance in a common hive, if they should take a notion to look for trouble.

It takes only a very few minutes for the jubilee to begin. It seems as though all the bees of the yard were summoned by magic to this very spot. But there is such a large area of accessible honey, and no restriction whatever against entering and partaking of it, that there is no fighting nor crowding, and the bees are too busy to attack any one. I frequently walk right through the thickest of them without veil or protection of any kind, and am hardly ever molested by a single bee. It is the crowding and fighting that makes them ill-tempered.

As the day draws near its close, the multitude of bees decreases, and by sundown everything is quiet again, and that is all there is to the cleaning process. As soon as the last bees have left I cover up and make everything bee-tight as it was before. Under no consideration would I leave any combs exposed after dark, for that is the time when the wax moth gets in its deadly work. Being late in the season, the danger from that source may not be very serious; but I would rather err on the safe side. Adhering rigidly to this precaution I never have any trouble with worms in my extracting combs nor in section honey either. To fumigate is almost an unknown term to me. I have had no oc-

casation for its practical application in twenty years or more.

Taking everything into consideration, the plan I outlined above is undoubtedly the simplest and most practical in use. But it has this drawback: All honey thus fed back to the bees is distributed in a promiscuous way. All have not only an even chance, but the strong colonies that need it the least get the most, while some that may need feeding get very little. However, to counteract this difficulty we have a way out. It is an easy matter to reserve at our last extracting a few dozen, or as many as we may need, of extra heavy combs of honey, and use them to supply the needy ones. This is by far the easiest, most complete, and least labor requiring method we can employ to supply our light colonies with their necessary winter and spring stores.

SWARTHMORE'S PEDIGREED GOLDENS

Queens from the well known SWARTHMORE. Ariaries of the late E. L. Pratt. The brightest *hustlers* and the most *gentle* pure strain of Golden in the United States.

The Swarthmore Apiaries, Swarthmore Pa.

7-10-3c

Queens

Virgin queens, reared from a select, champion layer, imported from Italy, 30 cts. each. Mated Queens reared from a select breeding queen of the famous J. P. Moore strain, 65 cts. These queens are mated where the drones or her own daughters predominate.

35 or 40 last year's queens that I wish to replace and a few this year's queens at the rate of three for \$1.00 8-10-1f

A. H. KANAGY, Kishacoquillas, Penn.

The Finest Honey.

We have the finest honey in Texas. It is from the Gaislaw; is a very light amber, but much like white clover. It is put up in 60 pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-1f

Cyprians Golden Jubilee Queens

It is just 50 years since I began bee keeping in Southern Michigan and 30 years since I advertised queens for sale from my apiary in Central Michigan; 30 years ago I sent the first Cyprians direct from the Island of Cyprus to America. They are great honey gatherers. Queens bred and mated in Cyprus in 1910, \$5 and \$6 each; home-bred, \$1 each, 5 for \$4.

Frank Benton, Box 17, Washington, D. C.

A Few Plain Facts as to Why You Should Join The Michigan Bee Keepers' Association

Two people working together are more than twice as strong as one. This strength multiplies as numbers increase. But numbers alone are not sufficient. There must be ACTION. And this action must be well directed, and with a purpose in view. If a number of people work together to attain a given object, it is next to impossible to prevent them attaining it. Hence if a number of bee keepers, in the form of an association, work together for better market conditions, success is almost certain.

AND THIS IS WHAT WE ARE DOING

This fall the seventh annual booklet has been published. It gives the name, address and honey report of each member. This booklet is then advertised in the bee journals, and sent to all who request it. In this way each member is certain that his name goes before buyers all over the United States. The logical outcome is better markets as each member is brought in touch with more buyers. This is proven by the fact that many of our members now sell as soon as, or before, the honey is ready to ship. A large per cent. have already sold this year's crop.

BUT WE WERE NOT SATISFIED TO STOP THERE

No, we went further and compiled a list of 100 buyers with addresses. We wrote each one of them asking what kind of honey they wanted, how put up, and how much. While not all replied, yet of those who did reply, the demand was for over ONE MILLION POUNDS OF HONEY. This list was sent to each member which enabled him to write at once to the buyer who wanted just what he had for sale.

EACH MEMBER WAS ADVISED AS TO MARKET CONDITIONS

The Executive Board then sent out to each member a recommendation as to what should be obtained for honey this year. F. O. B. cars at producers station. Reasons for this conclusion were also given. This meant much to the new beginner who did not know what he should ask for his honey, after he had produced it. It also helped the old producer by preventing the new, inexperienced man from dumping his crop on the market at any old price offered.

OUR MEMBERSHIP IS NOT CONFINED TO MICHIGAN

No, we now have members in twelve states. Some of the leading bee keepers in the land are enrolled with us, as well as others who are just starting. Both find it profitable to belong to the Michigan. Our system of finding markets by mail helps all, no matter where they reside.

MEMBERSHIP FROM NOW TO JANUARY FIRST 1912 FOR ONE DOLLAR

That is just exactly what we will do. It is now too late to have your name in this year's booklet, as it is already published, but we will credit your membership to January first, 1912 which will include the next year's booklet. In addition, we will send you at once the list of 100 buyers, putting you at once in touch with new markets, and send you the Executive Board's recommendation in regard to markets.

DON'T FORGET THAT WE ARE GROWING

But the larger we are the more we can do for you. Your individual strength increases in proportion to the number you are united with. That is why we want you with us. And you should not hesitate to come with us. You have worked hard for your honey. Now that you have it, you should not hesitate to put in One Dollar with your brothers to work for better market conditions. Send in your Dollar at once, and get by return mail the buyers' names, the Executive Board's recommendation, and a certificate of membership in the live bee keepers' association in the United States. Booklet sent free upon application. Address

E. B. TYRRELL, Sec.

230 Woodland Ave. - - - - Detroit, Mich.

Willow Herb Honey

This year we are able to offer our customers a honey that is somewhat of a novelty—that gathered from the great Willow Herb.

This plant is a species of fireweed, resembling, somewhat, the garden phlox, that springs up in the wake of forest fires in a few localities in the extreme northern part of the United States.

In two or three years it is usually crowded out by other plants, but, while it holds sway, it furnishes an abundant yield of the whitest, sweetest honey we have ever tasted. The flavor is mild, but has a delightful suggestion of piquant spiciness.

We are securing a bountiful crop of this honey in Northern Michigan. As usual, we are leaving it on the hives until it is all sealed over and thoroughly ripened—thick, rich and delicious.

We are putting it up in new, 60-pound, square tin cans, and offering it at ten cents a pound—\$6.00 for a can.

We will mail a sample of this honey for ten cents, and the ten cents may apply on any order sent in.

W. Z. Hutchinson
Flint, Michigan

A \$20.00 Queen for Only 40 Cents

The demand for our fine, **Standard-Bred Untested Italian Queens** is increasing rapidly. Read what two of our pleased customers have to say:

George W. York & Co.:—Our white clover lasted only two weeks, and while my average yield of honey per colony was about 40 pounds of surplus, the bees from the queen you sent me have gathered, so far, more than 100 pounds of fine honey. They are hustlers indeed, and the bees are very gentle. **Twenty dollars would not buy that queen.** After this I know where I will get my queens.—G. A. Barbisch, Houston Co., Minn., July 11, 1910.

George W. York & Co.:—I have had a good many queens from you in the past, and have never gotten a poor one.—Rev. Milton Mahin, Newcastle, Ind., July 18, 1910.

One of the above fine queens we send with the American Bee Journal for one year—both for only \$1.40. The Bee Journal alone is \$1.00, so the queen costs you in this way only 40 cents. A queen without the Bee Journal would be 75 cents; 3 for \$2 10; 6 for \$4.00; or 12 for \$7 50. Queens sent almost by return mail. Now is the time to requeen your colonies. Sample copy of the Bee Journal sent free on request. Address

GEORGE W. YORK & CO., 146 W. Superior St., Chicago, Ill.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER MILK BOTTLES

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTERS. POUDER, Indianapolis, Ind.

859 Massachusetts Avenue.

"DADANT'S FOUNDATION"

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER'S FOUNDATION

and WORKING your WAX for you.

Write us for ESTIMATE on full LINE of SUPPL'ES. It will pay you and costs nothing,
RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

Standard Goods

Of the A. I. Root Co. I have them Hives, Supers, Sections, Foundation, Smokers. Shipping cases: also A. B. G. in B-e Culture. Kept in stock ready to ship. Beeswax wanted. Catalog free.

D. COOLEY, Kendall, Mich.

ITALIAN BEES and Queens. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-11t

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 75 cents; tested 90 cents; select tested, \$1 10; breeder, \$1.65. One-comb nucleus, no queen, 80c. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation.

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

5-10-tf

White Clover Honey

According to my individual taste, no honey is superior to white clover. It has a mild, yet distinctive and delightful flavor. If you have never tasted pure, white, clover honey, there is a treat in store for you.

Here in my little apiary at Flint I have produced about 3,000 pounds of this kind of honey. At this date (July 18) the honey is still on the hives, ripening; but I expect to be extracting it about the time that you receive this issue of the Review. I shall put it up in *new*, 60-pound, tin cans, and offer it for sale at the low price (for this year) of ten cents a pound—\$6.00 for a 60-pound can.

Remember, this will not be the ordinary honey such as you usually get; it will be thoroughly ripened thick, rich and aromatic. If you care to do so you can send me ten cents and I will mail you a sample, and the ten cents may apply on any order you may send in.

I can probably fill your order as soon as it is received—certainly, very soon afterwards.

W. Z. Hutchinson
Flint, Mich.

P. S. Part of this honey is now extracted; and orders can be filled promptly.

Glass Jars Cheap

Last year we got an order from a jobbing firm to furnish a large shipment of honey put up in square, glass jars—one pound and dime sizes. After the bottles had been ordered and made, and were just ready to ship, from Pittsburg, Penn., the order was countermanded. This left us with the jars on hand, and, unless we put forth an extra effort to sell them, it looks as though they would remain unsold for a long time.

The jars are of white, flint glass, plain; that is, have no lettering. The pound size can be used with either corks or paper discs. The latter are much cheaper and really more desirable than corks.

The small size holds five ounces of honey, and is known to the trade as the "dime" jar. The regular retail price, with corks, is \$3.25 per gross, but we will furnish it, with corks, at \$2.75 per gross.

The other size is the one pound jar, and, with corks, the regular price is \$5.75 per gross, but we will sell it, with corks, at \$4.50 per gross, or, with paper discs, at \$4.00.

Goods will be shipped direct from Pittsburg, Penn. Address

Snyder Bee and Honey Co.

Kingston, N. Y.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms, white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—We quote the following prices: Fancy white comb honey, 16c to 17c. No. 1 white comb honey 14c to 15c; fancy white extracted 9c to 10c. Honey is coming in freely.

BLAKE-LEE CO.

Aug. 20, 1910 4 Chatham Row, Boston, Mass.

CHICAGO—We quote the following prices: Fancy white, 17c; No. 1 white, 16c; fancy amber, 12 to 13c; No. 1 amber, 10c; fancy dark, 10c; No. 1 dark, 9c; white extracted, 7 to 8c; amber, 6 to 7c; dark, 6c; beeswax, 31 to 32c.

R. A. BURNETT & CO.

July 15, 1910 199 S. Water St.

CINCINNATI—The market on comb honey is brisk. Fancy white comb is selling in a wholesale way at 15½ to 16c; fancy extracted at 8½ to 9½c; amber in barrels from 6½ to 7c. Beeswax is in fair demand at 6½c per 100 pounds. These are our selling prices, not what we are paying.

C. H. W. WEBER & CO.

July 26 1910 2146-2148 Central Ave.

DENVER—We quote strictly No. 1 new crop comb honey in a jobbing way at \$3.60 per case of 24 sections, No. 2 at \$3.15. Last season's crop is now all cleaned up. Extracted strictly No. 1 white at 8½c, light amber at 7½c, amber and strained at 6½c per pound. We pay 25c for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASS'N.

F. Rauchfuss, Mgr.

July 19, 1910 Denver, Colo.

TOLEDO—The demand for comb honey is thin, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.,

Feb. 19, 1910. Toledo, Ohio

KANSAS CITY—The demand for both comb and extracted honey is good and receipts light; so far we have been able to sell receipts upon arrival. We quote: No. 1 white comb per case of 24 sections, \$3.50; No. 2 white comb, \$3.00 to \$3.25; No. 1 amber comb, \$3.00 to \$3.25; No. 2 amber comb, \$2.50 to \$2.75. Extracted, 7½c per lb. Beeswax 25c to 28c per lb.

C. C. CLEMONS & CO.

July 21, 1910 Kansas City Mo.

CINCINNATI—This market is in a very healthy condition. All grades of honey are selling well. Fancy comb honey brings from 16c to 17c per p and by the single case from our store, and we are selling white extracted honey from 8c to 10c according to the quality and quantity bought. Amber honey from 5½c to 7½c according to the quality and quantity bought. We are paying 29c cash delivered here, or 31c in trade for from good to choice yellow beeswax.

THE FRED W. MUTH CO.

Sept. 6, 1910 51 Walnut St. Cincinnati, O.

NEW YORK CITY We are receiving shipments from the South and same find ready sale at from 13 to 15c a comb, according to quality. While it is too early as yet to say what the crop will be in the East and Middle West, from the reports we have received thus far, we should say that a good sized crop of white clover honey will be produced. As to extracted, the market is in good shape. As the crop on the Coast is exceedingly short prices are firm, even for what is carried over from last season, as well as for the new crop. New crop southern is arriving quite plentifully, and selling at from 65c to 70c per gallon for common average, and 75c to 85c for choice and fancy. Beeswax firm at 30 to 31c.

HILDRETH & SEGE KEN.

July 20, 1910 265 Greenwich St.

Carniolan Queens

	One	Six	Twelve
Untested	\$.75	\$ 4.00	\$ 7.20
Tested	1.00	5.50	10.00

Carniolan bees are natives of the cold Alps Mountains. They are very hardy as the severe winters have a tendency to weed out the weak colonies. They have great wing power. Have bred these bees exclusively for fourteen years and have tried queens from nearly all the queen breeders of the different districts in Northern Carniola. Running for extracted honey, they rarely swarm, if given plenty of drawn comb and kept in the shade.

Wm. Kernan, R. F. D. No. 2, Dushore, Pa

Buy your honey from members of the Michigan Bee Keepers' Association. Send your address for free annual booklet, giving names of members, with information concerning the honey they have have for sale. Address

E B TYRRELL, Sec.

230 Woodland Ave., Detroit, Mich.

Root Automatic Extractors



- No. 25—Four-frame Root Automatic for L. frames, 28 inches in diameter (weight 180 lbs.)..... \$25.00
- No. 27—Four-frame Root Automatic for frames not over 11 $\frac{3}{4}$ in. deep, 34 in. in diameter (weight 210 lbs.) 27.00
- No. 30—Six-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.)..... 30.00
- No. 40—Eight-frame Root Automatic for L. frames, 36 inches in diameter (weight 300 lbs.) 40.00
- GASOLINE ENGINE with all necessary belts and speed-controller, ready to attach to an extractor, and full directions to run f. o. b. factory, Wisconsin (weight ready to run, 300 lbs.) 60.00

Or engine and eight-frame extractor ready to run 100.00

The ratio of gears on hand-power machine is different than for engine. Mention which power you use when ordering. We send machine with crank unless otherwise ordered.

Other sizes built to order. Prices on application. Give outside dimensions of frame and length of top-bar, and number of frames you want to extract at one time.

We guarantee our engine to be first class, and to be simple enough for any one of fair intelligence to start and run. We have carefully tested it in every particular.

Readers of the Bee-Keepers' Review will recall the advice of the editor, Mr. Hutchinson, to keep more bees and produce more honey. With the scarcity of help during the past few years, it has been often impossible to do the extracting in

the height of the season when it should be done, and great losses have been sustained in many instances on account of this.

We have recently published a 16-page pamphlet on the Use of Power Extractors. This pamphlet shows the advantage of the use of power driven extractors, and gives detailed description of the management and operation of these machines. It is fully illustrated, and whether or not you have decided to buy an equipment of this sort, you will be interested in reading it.

While it may seem impossible to make the investment in one of these large extractors, when compared with the price of one of the small, hand-driven extractors, one should consider the great saving of

labor, and count the entire cost rather as an investment for the years to come, than an expense for the single season. It takes only a short time for \$25, \$50 or \$100 to be paid in wages to your assistant, while the

power extractors will probably save you not only an assistant for the present season, but for a number of years to come.

To any reader of this paper who will mention where he saw this advertisement, we will send a copy of this pamphlet on receipt of five cents in stamps, or we will send it with Gleanings in Bee Culture to new subscribers six months for twenty-five cents. You must be sure to ask for the pamphlet in connection with the subscription, otherwise it may be overlooked.



The A. I. Root Company, Medina, Ohio

OCTOBER, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 251.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Oct. 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60 pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

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Frank Benton, Box 17, Washington, D. C.

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of
5 to 7 cents per gallon. Process by mail \$1.00

C. W. Dayton, Chatsworth, Calif.

“Sun Kured” Raisins

“Sun Kured” brand of raisins are the most delicious confection imaginable, being very rich in sugar, and possessing a delightful flavor, distinctly their own. Buy direct from the growers, you are then sure of fresh goods, you also save 75 per cent. on the cost. Price, 7½ cents per lb. Packed in moisture proof boxes containing 25 lbs. \$1.85, 50 lbs., \$3.75; 100 lbs., \$7.25. If they are not the finest raisins you ever tasted in your life, return them and we will promptly refund your money.

C. R. Flory & Co., Lemoore, Calif.

Sept. 4

Comb and Extracted Honey

Write us when you have any to offer, naming your lowest price freight paid to Cincinnati. We buy every time your price justifies, and, we remit the very day the shipment arrives.

The Fred W. Muth Co.

51 Walnut St.

The Busy Bee Men

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25 00, but we will sell this for \$22 00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

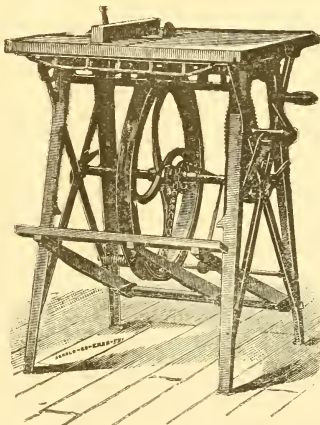
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

354 Ruby Street
Rockford, - Illinois



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

HONEY WANTED

When you have any to offer, let US hear from you. If it is comb honey, state how it is put up and the grade; if it is extracted, mail us a sample and state your lowest price, delivered Cincinnati. We can use any amount, and are always in the market.

C. H. W. WEBER & CO.
2146 Central Avenue [Cincinnati, Ohio.

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.
Jamestown, N. Y.

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

Hand's HANDSOME HUSTLERS

Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, 75c each; dozen, \$8.00. Tested, \$1.00; dozen, \$9.00. Three-frame nucleus without queen, \$3.00; $\frac{1}{2}$ -pound packages of bees, \$1.00; add price of queen wanted, etc. Send for circular.

J. E. HAND

Birmingham, Erie Co., Ohio.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

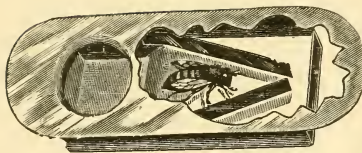
W. Z. Hutchinson, Flint, Mich.

Mott's Strain of Italians

By return mail. Untested, 65c; 6, \$3.80; 12, \$7.50. Natural Golden from Imported Stock, selected, \$1.00 each. Send for descriptive list. Leaflets, safe plans of introduction of Queens, 15c each. Leaflet plans of increase, 15c each, or copy of both for 25c. 7-10-11

E. E. MOTT, Glenwood, Mich.

FOR SALE 100 hives bees in two story standard hives \$5.00 per hive f. o. b. station. Box 545, San Antonio, Texas.



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

Only 25c Per Case.

60-lb. empty tins, two to a case, used but once, as good as new.

C. H. W. WEBER & CO., Cincinnati, Ohio

6-10-ft

For Sale.

300 colonies Italian bees in 8-frame, dovetailed hives with Hoffman frames and straight combs; 1000 supers in good shape, 400 empty 8-frame hives in good shape, bees located in good alfalfa and sweet clover district; wish to sell on account of health. Make us an offer, cash only.

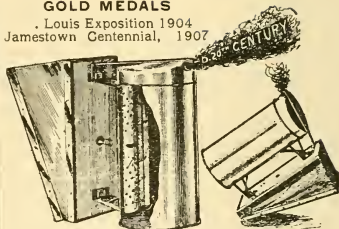
H. H. Hayward, Loveland, Colo.
425 Grant Ave.

Loveland Lbr. Co



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

GOLD MEDALS
Louis Exposition 1904
Jamestown Centennial, 1907



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is in one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Price \$1.00; two \$1.60, by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2.00.

We sell Danzenbaker hives and supers with metal **propolis shields**, and anything in **bee supplies at factory prices**.

Send your address and B—friends, for catalogs.

F. DANZENBAKER, Norfolk, Va.
6-10-ft

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

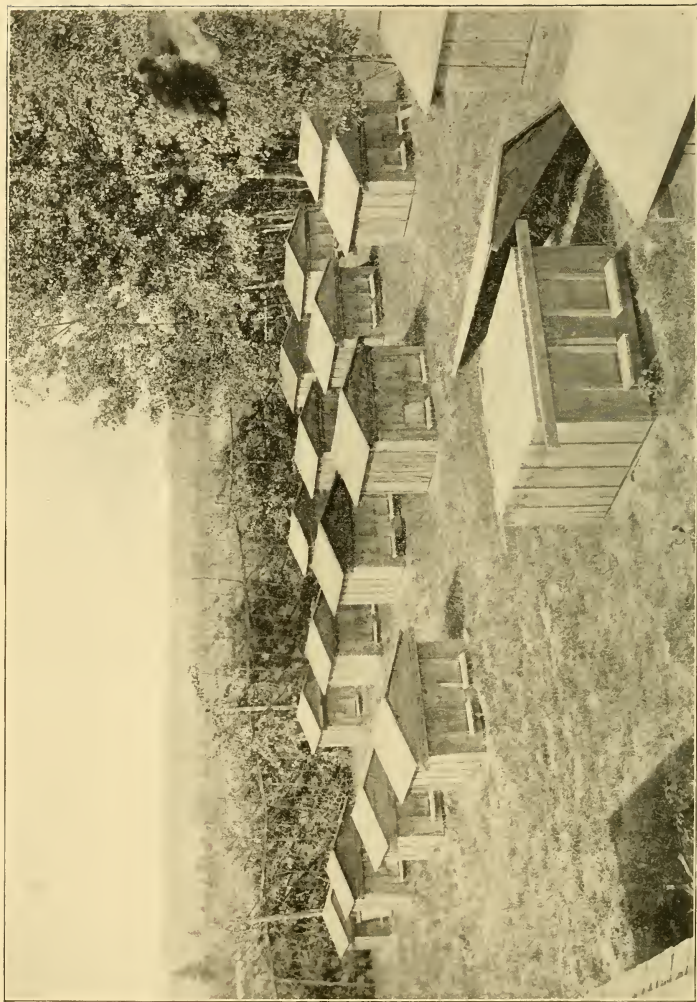
W. Z. HUTCHINSON, Flint, Mich.



FOR SALE—It will pay to get our special proposition
A. G. WOODMAN CO., G. and Rapids, Mich.

are our specialty. We furnish such extensive bee keepers as E. D. Townsend and others. Consider getting your bees into Protection Hives this fall. Give us list of goods wanted.

A. G. WOODMAN CO.



Apiary of Ira D. Bartlett Being Prepared for Winter.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, OCTOBER 1, 1910.

NO. 10

Successful Wintering of Bees Out of Doors In the Far North.

IRA D. BARTLETT.



DURING the past few years I have received numerous inquiries as to my method, and style of hives, used in wintering bees out of doors, hence I conclude that a description may

interest a goodly number of bee keepers who practice cellar wintering, or who may not be as successful as they would like in wintering their bees in boxes, or some other equipment, out of doors.

As I look about me I notice that the majority of apiarists in my neighborhood are wintering their bees in boxes, into which the hive is placed and packed with some sort of material that is most convenient to get.

I know of only one apiarist here who seems to make a marked success of cellar wintering, and he told me that he left the bees on their summer stands until

the snow came. I do not see why the bees should do so much better under those conditions, unless the queen kept laying later, and the old bees had entirely disappeared, by the time they were put into the cellar.

Mr. Geo. Jaquays, a successful comb honey producer who keeps about 75 colonies, wintered his bees in hives similar to my own, packed with chaff, when he first started keeping bees, but later he built a cellar under the living room of his house and wintered his bees in it for some few seasons, told me that he was through with cellar wintering; and, the past winter, he wintered his bees successfully in packed, out-of-door boxes.

I am located in the snow belt of Michigan, 45° N. latitude, and it is possible that this is one reason why the bees winter so well; they having the protection of the snow which oft times drifts high over them, but which need cause no fear of the bees smothering, even though a crust form over the top of the snow in the early spring. There is plenty of air in the loose snow. How-

ever, of late years, we do not get so much snow, and I find that the same kind of entrance-arrangement does not prove as well as during the heavy snow periods, so I have discontinued the portico on my hives, and have found it advantageous to decrease the size of the entrance.

I formerly used an entrance $\frac{5}{8}$ of an inch by nearly the width of the hive, but, of late, I have contracted this to about $\frac{3}{4} \times 4\frac{1}{2}$ inches. I find this better where the snow is not very heavy, as the chilling winds can not then effect very much. In the frontispiece you will notice that the entrances are about eight inches wide; these are contracted by means of a lath, four inches long, tacked to one side of the entrance so as to swing up. These pieces are swung up when warm weather arrives or when I wish to clean out the dead bees from under the frames, which should be done in the late fall, once during winter, and in the spring.

CAUSE OF POOR WINTERING.

I suspect that the cause of poor wintering is due, in most cases, to shiftlessness, or neglect, on the part of the man who puts up the bees for winter; also by inattention during the winter and early spring.

In one instance I loaned several of my winter hives to a friend who was "in hard luck," and the next spring when going by his place stopped to see how the bees came through. Well, the fact is, he lost nearly all of his bees and by sheer neglect. The piece that goes over the entrance to let the bees through the packing to the outside, if there was any at all, was too narrow, and the chaff had worked through and blocked up the entrance and suffocated all his bees.

In other cases I have found just loose straw packed about the summer hive; and, again, the roof boards so leaky that the rain and snow got down through and froze over the top of the bees, and, well even then, they will oft times come out of it alive. Some place a shock of corn fodder about the hive and wonder why

they do not get much honey the next season. I do not expect a bee keeper, worthy of the name, will do these things, but it is a cold fact that the majority of the small bee keepers, or farmer-bee-keepers, as we call them, do these very things.

Now let me tell those of you who are not successful in cellar wintering, or who winter unsuccessfully out of doors, how I have succeeded for 17 years, and any one can do likewise. It's no trick—just simply a comfortable place.

Build a box, the one like I use is, perhaps, as good as any and the photo will show you very plainly how it is constructed.

CONSTRUCTION OF PACKING BOX.

Inch boards nailed to 2 x 4s compose the bottom. Boards 24 inches long, nailed to inch strips, compose the sides and ends. Nail the bottom strips of the ends and sides an inch from the lower edge of the boards and rest the strip on the bottom proper of your box. Tack a nail or hive staple at each corner of the top and bottom to hold the sides and ends together, nail a strip across the ends on the out side to slide the cover on, make a good cover and cover it with a no-leak material, so as to slide easily on the strip above mentioned, cut the entrance the proper height, which depends upon whether you are going to pack under the hives you place in it or not, make an alighting board and you have a winter hive that is good.

These boxes are made of a size to hold four colonies. Two are faced to the east and two to the west. There is left sufficient room for about five inches of packing all around, on the outside. The hives may be crowded together at the sides and back, or separated, say, two inches, and filled in with packing, or left and given so much dead air space. Either plan will be well. I have been as successful the past three years with colonies with no packing under the hives as with those having three inches of packing.

Place your colonies in these boxes any time in September, or later; see that the little board over the entrance is so placed that the bees can run under and out through the outside entrance. Take off your wooden cover used during the summer, place a piece of canvass over the frames, then some burlap, bag or quilt of some description, over this, and then two or three thicknesses of newspaper over this, if you live where it gets very cold, and then over all place your packing material around the sides and ends, and over the hives to a depth of 10 inches, or more. With this amount of packing there will be no condensation of moisture in the hive; the quilts and paper will be bone dry; the frames of comb and honey will come out bright in nearly every case, and any colony that is in shape and that would winter any where will come out O. K.

Regarding winter feed, be sure that the bees have a plenty of good honey, or, better still, cane granulated sugar syrup. This syrup will winter them perfectly.

Regarding ventilation: See that there

is a free passage of air above the hives over the packing. This is done by nailing the strip that the cover slides on so as to leave, say, an inch, between the top of the box and cover. During the winter, at least once, reach in with a bent wire and clean out all the dead bees. If the snow is deep, shovel it out in February, and clean out the dead bees, as the usual space under the frames is not sufficient to hold what bees will die in some colonies. In the most of the colonies it may be all right if you do not clean out the dead bees, but it will do no harm, and you will save those that would otherwise perish; for, just as sure as the bees find they are blocked in they will become excited, consume honey, and get the disentery ere they can get out.

You can leave the bees in these winter hives until they get built up strong, but they will do better if put out when settled warm weather comes. They need the sunshine.

EAST JORDAN, Mich., Sept. 14, 1910.



The Honey Market and Factors Contributing to The Selling of Honey.

M. V. FACEY.



THIS article is based upon an editorial in the Review last May, relating to the selling of honey, a splendid article, full of wise suggestions and good common sense, and leav-

There are two great factors in the successful marketing of any article; first, the kind of product the market demands, and, second, the proper presentation or exploitation of it; and success can never be complete without the last factor, nor durable without the first. When the bee keeper produces his crop of honey, he is also doing his part to determine what the dealer may ask for it or be compelled to sell it for; whether the market shall be extended or curtailed.

"The majority of bee keepers are good producers." In my business I use a good deal of comb as well as extracted

ing little opening for criticism, hence, while I may differ in a few minor items, I shall confine myself principally to the extension of its scope.

honey. I buy one man's honey whose product is worth at least two cents a pound more than that of any other producer's goods (one only excepted, whose honey always sells at a fancy price, sometimes nearly double the ruling figure) and at this advanced price it is still the cheapest honey I buy, as every sale calls for more, and every one that buys becomes an agent of publicity. While I am reaping the benefit of this publicity and public good will, it is the producer who has made it possible, and his work in the bee-yard is an active agent in building up my trade. As a prime factor in advancing the price of comb honey, and extending its market, put intelligence into the production of the very finest article; do not be satisfied with anything short of perfection, and the sale and price will both be assured.

WHEN HONEY CAN'T BE LEFT ON ALL THE SEASON.

The average bee keeper is a poor producer of extracted honey. The advice often given to leave the honey all on the hives until the close of the season, and then extract, may be given and followed with advantage where the flow is from a single source, but where the crop is the result of a series of flows of different grades of honey, the advice is pernicious. It requires less judgment and care to produce a crop of honey in this way, but it lessens the crop without lessening the work, and the inferior grades of honey practically reduce the whole crop to their own value; thus, every year, I buy amber honey at a reduced price, where the honey should be sent to me in two grades, at least—amber or dark, and white. Only last fall I bought a lot of honey wherein the man sent me a sample of clover honey, asking for prices, and I quoted him prices such as I paid for good *amber* honey. He was disappointed; said he had left the honey on the hives all the season to ripen, and thought he might receive my highest price. A light flow of buckwheat honey in the fall had lessened the value of his clover honey

more than the buckwheat honey in it was worth.

I am not criticizing the honey produced by this method when there is only the single source of surplus, for in that case the honey, when rightly handled, is unexcelled, and will command both the price and the customers, which can not be said of the product where the flow is varied. The dealer, to build up a permanent trade, should have each kind of honey in its purity as nearly possible, ripened but not mixed, and the producer should co-operate with this requirement as fully as may be in his power. This will require more thought and skill in production, as each bee keeper would have to adapt his method to his locality. He should learn to be a good judge of honey, and keep in close touch with all the varying conditions of the honey flow—but these things do not come under the head of this article; I have written what I have along this line because a common hindrance to many a dealer's success in building up his trade is faulty production, and the common lack of knowledge in properly grading. I would emphasize the fact that while the different kinds of honey should be taken in their season separately they must always be ripened.

MAKING A QUICK SALE.

"Did you ever stop to think that you spend all of your season producing your crop of honey, and then sell it in about fifteen minutes?"

This sentence tells only half a truth. Throughout the entire season, while you are producing your crop you are building for that sale, and, as soon as your crop is removed, you know that the kind of sale possible for you to make is practically decided. The "western bee keeper," mentioned in your editorial, did well in devoting all his energies to the production of an article worthy of the highest price, and, being worth it, he could readily sell it, and, having sold it, he was left free to again devote all his energies to the production of another crop that would again command the highest price.

As this honey is being produced he is alive to conditions about him, so that by the time his crop is ready for the market he has weighed all the conditions of the market, and has definitely made up his mind as to the price he will ask. The last act of the sale is merely the acceptance of a price for the honey which has been previously determined, the conclusion having been reached by a careful summing up of the prevailing market conditions. The man who actually makes his sale in fifteen minutes is the man who has lacked aim in production, and has neglected to follow conditions; his price is determined at the time: he sells ignorantly, and often at a loss. If the yield is large in the neighborhood of such a bee keeper, he becomes timid and is ready to sell still lower. It is the offerings of these people which act as depressing factors in the markets.

EXTENDING THE MARKET.

I shall treat this under two headings, first, selling our own crop, and, second, selling honey as a specialty.

It is often a problem to the bee keeper as to whether to retail his honey, or sell it in a lot at wholesale. No rule can be laid down, except to be modified by circumstances and conditions. Among conditions bearing upon this decision, we would place natural adaptability first. The person who dislikes the work of retailing his goods will rarely, if ever, succeed by so doing. We are fond of telling people if they put their *best selves* into anything, success will reward them, but the history of all human effort refutes the certainty of this assumption. We can cultivate proficiency, improve our methods, and in every way make the most of ourselves, yet the fact remains, persistent and unchanged, that no person can succeed when he is unqualified by Nature, and no person can ever reach any great success unless Nature has specially endowed him for his work. This law, it seems to me, applies with special force in salesmanship; with an increasing ratio as the business develops.

The recognition of this law will greatly assist the bee keeper in deciding whether he should become his own salesman, and to what extent. There are conditions where a person, even when unfitted for the work, should still sell his own honey.

Most bee keepers commence in a small way with a few colonies of bees and secure a crop which amounts to only a few cans of honey. Here is a case where the honey should be sold around home; as there is always a call for more or less in a neighborhood, either at the local stores, or among honey-loving neighbors, where it can be sold with but little trouble.

If you intend to keep your neighborhood supplied you will study the tastes of your customers and keep them regularly supplied, remembering always that a limited number of patrons well cared for are worth more than a great number carelessly handled. After awhile they become so accustomed to your honey as to be willing to give you two or three cents per pound more than they would give for any other honey. They "get the habit." Of course, this applies with greater force to extracted honey.

RAISING THE PRICE OF HONEY MAY HASTEN SALES.

While the wants of a neighborhood should be fully supplied, they must not be over supplied. It is always unwise to crowd honey upon an unwilling market, or to drop your price to promote your sales. There are always people who will try at times to persuade you to cut down your price; if you concede the reduction, the sale is used as an argument by every one else to compel a lower price, and, strange to say, the consumption is lessened rather than increased by the drop. I have found that a great many people are willing to buy honey and pay a good price for it in a firm market, or when scarce, who will defer the purchase if they think they can get it at any time, perhaps at a lower price. I had a practical illustration of this when a neighboring bee

keeper brought in a load of comb honey to Preston a few years ago. The price asked for this honey was 11 cts., but only 10 cts. per lb. was offered, and only for a limited amount. I was not handling comb honey at the time, but some one advised the party to try me. Knowing the market to be bare of honey, I bought the honey at the 11 cts. per lb. I immediately informed the parties who had been solicited that I had bought the honey, and that they could secure what they needed for their trade at 13 cents per lb. They had no hopes now of securing a drop in price, and, fearing I might ship it away, they doubled their orders at 13 cts. per lb., taking the lot with the exception of two cases which I kept for my own use. This is only one illustration of a number which have come under my observation. An outlet should be secured in every locality for the absorption of any surplus honey that may be secured, and some one should be in touch at all times with the market thus open, some one who will be prepared to buy or ship the honey of any one who must turn his honey into money, or who may, for any reason, wish to

make immediate sale. Every locality should have such a market where honey may be sold, for its shipping value, just as other products are sold. This market which may either be provided by private enterprise or co-operatively, will give confidence and backbone to those inclined to sacrifice their honey—both in retail and wholesale markets.

SELLING DARK HONEY NEAR HOME.

Friend H. strikes the right cord where he advises bee keepers to try the disposal of their dark honey at home. Dark honey varies so much in flavor and quality that people hesitate to order it, and yet nearly one-third of all honey users actually prefer it, and will buy it as suggested. Sold in this way, nearly the entire crop of No. 1 dark honey ought readily to be taken at 10 cts. per lb. in 10 pound pails. At this price the honey might have sold a trifle slower at first, but even with the lessened sales, the salesman would have netted a greater daily income than with the larger sales at the lesser price. Within a year or so his sales would be quite as large as previously at 8c per lb.

Concluded in November number



Marketing Conditions Have Improved With Increased Production.

WALTER S. POWDER.

IN these days of higher prices for almost everything that is offered, we wonder why the price of honey does not advance in a ratio with other foods. We acknowledge an increased demand, but there has also been an increased production, and we are thankful that prices have held their own; for, under ordinary circumstances, the improved facilities for increasing our product would have meant a decline in prices. Conditions have improved in favor of the producer within the past few years, by which cash buyers are taking

up the crop at a bargain price, thus eliminating the demoralizing feature of consigning goods. The jobber who buys on a spot cash basis could never compete with the commission man who receives his goods on the consignment plan. The honey crop, as a rule, in the Central States, is not made up of car lots, but is shipped to jobbers in local shipments, while alfalfa and sage honey must be shipped in car lots, as a matter of saving in transportation charges. In the days when the consignment plan was in vogue the jobber who purchased on the cash

bargain basis often found himself confused when he learned that his neighbor, the commission man, was offering honey by the single case at prices at or below what the jobber had paid for his stock. We are fortunate in having good responsible cash buyers throughout the country, and many of them have built up a heavy trade in amber honey for manufacturing purposes as well as for the fancy grades.

I have frequently noticed that some producers have the habit of shipping their honey to the larger cities and selling it in a lump at wholesale prices, when a little attention to the home outlook would enable them to dispose of their crop at much higher prices. Your editorial suggesting a dollar package is excellent, and the goods will advertise themselves when once started. The writer could name a number of men who have been very successful in selling honey from house to house, in the larger cities, during the fall and winter months. If there is any secret in the success of this work it lies in *keeping up the quality*. He can give his patron a taste, and, if quality is right, a sale is made, and a card left with his address will likely bring a mail order in the near future for more of the same quality. In this line of work, and also in the packing and

bottling trade, there is one temptation that seems very hard for some to resist, and that is the feature of increasing profits by putting out cheaper grades of honey. This is an *awful mistake*, and is bound to result in the downfall of the salesman. Amber and cheaper grades of honey are now in demand for manufacturing purposes, and should be disposed of in their proper channels. The bottler of amber honey does not realize what an immense damage he is doing to the entire fraternity. The grocer who buys it, finds it remaining on his shelves and will not make further purchases. The family who buys a jar of it, will cease using honey, believing that all honey is alike. The bottler who keeps up the quality will find that he has a satisfying and growing business, while the man who cheapens his product will finally get out of the business in disgust.

To the producer I would suggest that he devote his first effort to establishing a home market. If he must ship to a dealer be sure to sell to a responsible cash buyer, and have an understanding about the details, such as freight and drayage before shipping. If you are a dealer and selling honey for table purposes, *keep up the quality*.

INDIANAPOLIS, Ind., May 9, 1910.



Securing Cellar-Wintering that will Never Fail.

E. S. MILLER.

I have been much interested in the discussion of bee cellars in *Gleanings* and in the *Review*; and, by the way, I have a bone to pick with the editors. There is editor Root, advising beginners to winter bees out of doors. It may be all right for some beginners who ought not to keep bees any way, for, in winters like this, it usually proves to be their finish. And, editor Hutchinson, do you mean to say that you would leave

that three-foot square hole in the top of your cellar open in cold weather? If so, I hope you will pardon me for saying that you would be doing exactly the wrong thing. The warm air would go out, and the cold air would run in like water into a well. It would condense the moisture in the hives, and the dampness would be worse than before. Once upon a time I was just foolish enough to do that very thing, and I lost half of that

lot of bees. Of course, if you mean that the hole is to be opened to cool the bees off when they get too hot, then I can agree with you.

SUB-EARTH VENTILATION.

Let me say to those who are thinking of building new cellars or repairing old ones, that if a proper system of ventilation is adopted, and the other conditions are made right, there is no necessity for losing a single colony in wintering. I have not only worked this out theoretically, but have also given it a pretty thorough test in a practical way. If any one is having trouble with his cellar, let him read this carefully; it is worth remembering.

REQUISITES FOR SUCCESSFUL CELLAR-WINTERING.

1. Make the cellar all underground. It is the *earth* that keeps the temperature nearly constant. If on a hillside, bank it up.

With saw dust or other material make the top frost proof.

3. Make the ceiling and upper part of the cellar tight—air tight if possible. Plaster the ceiling and walls. Use double doors and windows, or bank up outside.

4. Make a sub-earth ventilator of tile six or eight inches in diameter and extending at least 50 feet in the direction from which the prevailing wind comes; that is, to the west or southwest. If there is a hillside, it may extend down the hill. The tile should be placed below the frost line, and it should enter near the cellar floor. There should be some means of partly closing the outside entrance to the tile so as to regulate the current of air in cold weather. A wire screen would help to keep out mice.

5. Make another sub-earth ventilator like the first, only shorter, and place it on the opposite side of the cellar. This is for the air to pass *out*. If you prefer, you can provide for the exit of air as follows: Build a chimney from the bottom of the cellar and make an opening near the cellar floor into the chimney.

Also make another hole into the chimney near the ceiling, to be opened only when the air gets too warm. Don't put a stove into the cellar. You will not need it. Neither will any lime be needed, as the temperature and humidity will both be just right. The bottom boards may be left on the hives if there is a reasonably large entrance.

Now, why should the ventilator be extended so far underground? There are two reasons: First, the wind will cause a current of air to pass into and out of the cellar. Even a very gentle breeze will produce a perceptible flow of air through the underground duct, as it may be shown by holding a lighted candle inside the cellar where the air enters. By holding the flame near the inner opening of the other ventilator, its deflection will show the current to be *outward*. Secondly, if the outside entrance is kept partly closed in cold weather, the air will pass through the large tile very slowly, and will be warmed before entering the cellar.

RIGHT AND WRONG WAYS OF VENTILATING.

The following will illustrate the difference between the right way and the wrong way of ventilating. Three years ago a cement block cellar was built, 14 x 20 x 8 ft. deep, and ducts for the entering air were passed straight down just outside the cellar walls, and made to open into the cellar at the bottom. Other openings were made at the top for the exit of the air. By testing with the flame, it was seen to be seldom that any current could be detected. Moreover, the bees have not wintered satisfactorily, although no colonies have been lost. Why was it not a success? Simply because the wind pressure is horizontal and not downward, and because there was too large an opening at the top of the cellar.

In another cellar it was found that the combs would become very damp and mouldy after a cold spell in winter. A year and a half ago an underground ventilator, 50 feet long, was installed,

This was the only change made, but not a trace of condensed moisture has been found in the cellar since that time, and the bees winter in perfect condition.

GIVING STORES IN WINTER.

There is one other thing that must be attended to if we expect to carry every colony through. The bees must have sufficient stores. If colonies are found to be light when put into the cellar, or at any time afterward, while inside, there seems to be only one practical way of feeding them, and that is to remove the cover and place on the hive a super containing combs of honey.

Let me repeat; there is no necessity for losing colonies in wintering, provided conditions are right, and it is the business of the successful bee keeper to make them right.

VALPARAISO, Ind., Jan. 17, 1910.

[I don't know as there is any objection to sub-earth ventilation for a bee cellar, and it would seem as though it had advantages. I once had a six-inch sub-earth ventilator, 75 feet long and six feet under ground. The air was drawn from the cellar through a pipe that passed up through the floor and connected with the stove pipe in the room above. Such ventilation seems ideal, yet I was never able to see that the bees wintered any better than with ordinary ventilation.

We have a board cover for the three-foot opening in the ceiling of our cellar, and cover up the opening according to the temperature. As the winter advances, and we find the temperature going down, we cover up more of the opening. Towards spring as the bees rouse up a little, and there are warmer days, more ventilation is needed to allow the heat to escape.—EDITOR.]



Some of the Basic Principles in the Selling of Honey.

C. A. HATCH.

FRIEND H:—I have read your editorial in May Review on selling honey, and would offer the following as supplement and criticism.

Does it really make any difference as to the time it takes to sell one's honey? Can not the job be done in 15 minutes just as well as 15 days, if one is ready to sell and really *knows* what he wants? The real trouble is in not *knowing* what is a proper price, then, just as soon as the proper person comes along that will pay the proper price, he should sell.

How is the honey producer to know the proper price? If he spends no time or thought or takes no means to find out what the crop in other parts of the country is, never reads the bee papers nor looks at a market report, he never will know. The law of supply and

demand regulate prices, and, unless we have some means of knowing what the supply is how can we know what the price is to be? If the demand is always a fixed quantity, supply will always have a direct bearing on the price. Suppose Brown has been using 1,000 lbs. of honey each year and getting it of Smith at say 10c per lb. This year Smith has double his usual crop, and Jones, his neighbor, who never produced any honey for sale, now has 1,000 lbs. Brown has 3,000 lbs. to draw from, and if Jones offers his honey at 9c, Smith must sell his at that price, or *lose the sale*. But, suppose Smith has only 500 lbs. for his crop, and Jones none, thus becoming a buyer, Smith can compel Brown to pay more for his honey; for, if he does not take it, Jones will, at better prices. If

Jones is never a producer but is a person who can be induced to become a buyer, then Smith has increased the demand and made competition for the article he has for sale and therefore a tendency for better prices; and this is legitimate business for beekeepers and bee associations—trying to induce people who are not users of honey to become such. And, by the way, the National Society had a fund for that very purpose, have any results come from its use?

THE IMPORTANCE OF QUALITY.

Nothing will take the place of quality in getting better prices. Poor honey not only spoils its own price but of other good honey, by spoiling what would otherwise be a good customer. If you have poor honey, through no fault of your own, do not try to force it on your customers, but send it to large bakeries and sell it for what it will bring. Even when a customer sees and tastes the honey, it is risky, for he may be hungry at the time, and it may taste better than it will at other times; or it may be lacking in wearing qualities; or, in other words, may taste good at first, but soon get tiresome. Honey dew is a good example of this kind of honey.

HOW TO MAKE THE PRICE OF HONEY.

This is the way I would do it. Suppose best white is selling in Chicago at 8c for extracted and 15c for comb: From this we must take freight and commission. Freight on comb honey from Richland Center to Chicago is first class, or 50c per 100; on extracted, 20c per 100, or third class. Commission on each is 10 per cent., which would leave the comb honey worth to the producer about 13c per lb.; or, if he sold at home for 13c per lb. he would get as much money as though he sold through a commission house in the city for 15c per lb. But, usually he can get more nearly the city price, say, 14c, and that would be my asking price, knowing that if I had to come down to 13c I was still safe.

For the extracted I would ask the full

wholesale price; for I think the difference in wholesale price and retail would not count in that case; for, if any dealer paid the wholesale price in the city and shipped it in competition with me I would still have freight and commission the advantage of him.

PACKAGES.

The style of package used should be adapted to your customer's needs; remembering always that your customers are *supreme* in their decision, no matter what *you* think. I have found five gallon cans, both round jacketed, and square boxed, suited to all my needs; the amount I sell in 5- and 10-lb. pails being too small to mention.

When you once get a customer, *keep him*. Treat all justly, and give all you promise. If misunderstandings occur, be willing to do *more than justice*, strictly enforced, would demand, and that customer will be yours always.

ADVERTISING.

It matters not how the producer concludes to sell his honey, whether by mail orders, peddling, consignment to commission men, or wholesaling to some jobber, he must first let his proposed customers know what he has. If it is a large dealer, one letter may do it all; but if his prospective buyers are scattered over a whole state there is no practical way to reach them except through the newspapers taken in that state. Suppose he concludes to try selling his honey in Des Moines, Iowa. His first business would be to go to some newspaper office of his home town and look up in their directory the different papers published in Des Moines. Next select the one with the greatest number of people in the city, and insert proper announcement of what he had to sell. If he gets no response, or not enough to make it a paying investment, he has made a mistake and has lost money and must try again. Not all advertisements pay. My experience has been that nearly one-half are failures. I advertised once in a high-priced

publication and didn't get enough sales from it to pay the bill, if all the money had been turned in. I know no rule to tell which are the ones that will pay and that will not. Wish I did, it would be quite a saving.

To sum it all up—good, well-ripened honey, in new, clean packages, such as your customers like, put before cus-

tomers in a straightforward way, and handled in a business way, always treating others as you would be treated, can not help bringing success in selling. Co-operate with your neighbors. Do not try to undersell any body. Have a fair price and stick to it.

RICHLAND CENTER, Wis., May 6, 1910.



Retailing Honey and Building up a Profitable Grocery Trade.

F. B. CAVANAGH.



THE most profitable method of turning the season's output into cash may be most logically decided by an examination of the man and the conditions under which he is

placed. Some are naturally poor salesman, either by personal interview or letter writing. As I, myself, am one of this class, I wish to offer the encouragement to such that salesmanship is largely an acquired art, derived through study and experience.

Retailing honey is, to a certain extent, a separate business from producing it. If one can realize enough extra net profit at retail, above wholesale prices, to bring profits equal to those of any other business in which he might engage during winter months, then by all means retail the honey, for, by so doing, one is contributing his share toward maintaining prices and increasing the consumption of honey. For the purpose of being more clearly understood in this article I wish to designate retail sales as applying to house to house canvas, grocery trade and small mail orders only; classing large

orders to bottlers, commission house consignments and sales to manufacturers as wholesale shipments.

I am satisfied that the majority of bee keepers who now wholesale their honey, do so ignorantly, neither realizing the profits to be derived nor the great advantage in gaining a permanent market. The relative price paid for extracted honey by the consumer is about double the wholesale price. Now, who is making the most money out of his effort put forth, the man who produces and sells a carload of honey at 7c, or he who buys that 7c-honey, and retails it at 15c to the consumer?

That a house to house trade in honey is a most profitable business has often been proved. I know a man who has for several years bought large quantities of honey and supplied some 10,000 customers. As he is an expert bee keeper, as well as an ex-bee keeper, it is obvious that his present pasture is not less rich than the bee keeping field. He has become so well acquainted with his customers that he no longer has to "talk honey," but, as he himself expresses it, has only to stick his head through the door and ask "how much?" Furthermore, he is a specialist in selling honey; gets 15c a pound for extracted honey, and carries honey of a quality well worth it. It is only fair to admit that

not all fields will yield equal returns, yet many of us have rich opportunities in this line and *do not realize it*.

POSSIBILITIES OF THE GROCERY TRADE.

The grocery trade is perhaps the most important sales medium of all, because of its possibilities of distributing large quantities of extracted honey of a quality and price controlled by the producer. Now if we employ grocers or other sub-agents to distribute our honey, we cannot expect to receive quite the same returns. We must expect to pay our help in selling, just as we pay our help in producing a crop of honey. There are various methods of reaching the grocery trade through circular letters and advertising mediums, but all of them are practically failures with extracted honey. Grocers are prejudiced in favor of comb honey because of certain dealers having sold them honey which candied. After exhibiting candied honey in glass for some time, they shove it onto a back shelf to be shown only as called for, and then only at a detriment so far as sales are concerned. "Extracted honey doesn't sell, no demand for it, we want it in the comb" is what you will soon become accustomed to hear when you start out as a drummer of your own bottled honey. The remedy is to "take the bull by the horns" as it were, and compel them to buy it or try it.

First convince the merchant that you are a real live bee keeper and know what honey is. Then convince him that his present stock of candied honey is pure and that by melting it he will sustain no loss. If he is no fusser, offer to take the honey in exchange for your own bottled honey which offer he will gladly accept.

Never "knock" a competitor's honey, even if you know the goods to be inferior to your own product. Always *boost honey*. Incidentally suggest to this grocer that you would be glad to supply him with your honey at any time he is in need. Furnish both comb and extracted honey, for, by so doing, you

monopolize more completely your market; besides more firmly impressing the fact that you are a bee keeper.

THE SELLING-ARGUMENTS.

Meet the usual objections in the following manner, and things are bound to come your way. "Honey candies." Yes, all pure honey is apt to candy. Mine is sealed at 160 degrees, which will keep it liquid for a long time, but, should it ever candy, I will replace it with fresh liquid honey, free of charge." "Extracted honey will not sell here, people want comb." "You, of course know more about selling than I do, but being a specialist in pure honey for many years, I can assure you success in selling my extracted honey. In the first place, this extracted honey is a superior article, from white clover, rich and delicious. Every customer who buys one bottle will buy several. Honey being regarded as a luxury demands a conspicuous place on your shelves, window or show case (here select and insist on your location for display.) Your customers must learn how delicious this honey is, and the great saving over buying it in the comb. For this purpose I am not only selling it under a very attractive label, but here is a placard calling attention to this pure honey, also some leaflets to give away. Furthermore, I *guarantee the sale* of every pound of honey put in your store. If it doesn't sell to suit you I will take it back and return your money with no arguments. You have no breakage. I stand it if any. I pay the freight. The net price delivered safely to you is so and so for the different sizes, and you sell them for so and so, realizing a profit of so and so, with no possible chance of loss. Shall I ship you 4 doz. of each size?" As a last resort, offer to leave a case of honey to be sold, but don't get them into a habit of expecting this, for grocers, like others, are apt to push sales harder where *they have money invested*. Impress your grocer with the fact that you are in the field permanently, and will call at stated

intervals or on request. Keep an eye out for shaky or dishonest firms. Failures occur in all lines of business; so, be careful and don't get caught with goods unpaid for. Make sales on a net cash basis, or else figure two per cent. for cash, and give 30 days. This each salesman must decide for himself according to his experience and locality.

ONE POINT IN GETTING BIG ORDERS.

Always ship bottled honey in original packing cases with corrugated partitions; as nothing disgusts a dealer more than to receive a lot of broken and besmeared glasses of honey. Have your cases made in regular sizes of about four dozen each, which will discourage the small, single dozen order idea, and give you a better and larger display, valuable in itself.

Frequently I have made sales to grocers through a friend in a distant city. One sold several tons of honey each year in bottles, tin pails, 60-pound cans, and barrels, and at a nice profit to me. I paid him 10 per cent., and found him

worth it, as there were no losses nor adjustments for me to worry about.

Another time I secured, through a friend, the name of a bank in a distant state. I wrote the bank, and, by mention of my friend, was favored with the names of several grocers. These were all written to, resulting in the sale of nearly \$100 worth of honey in tin pails at $3\frac{1}{2}$ cents above market price, or a net profit of \$30 for doing the writing.

Make your mail order customers permanent by writing them each year. It is a fatal mistake to expect them to write to you, for that it isn't the way it works out; and customers expect a man who has honey to dispose of to care enough about selling it to write them *first*. Remember that mail order customers cost money, and are valuable assets to the business. Keep a list showing the amount of each sale; the kind of package, and the price received, which will serve as a valuable index in deciding what kind of letter to write next year.

HEBRON, Ind., Dec. 21, 1909.



More Profit in Retailing even a Small Crop Than in Working Out.

H. A. SMITH.

MY experience during the past fall has forcibly impressed upon me the advantage of attending strictly to my own business, and nothing else. In other words, I have seen the disadvantage of allowing anything to sidetrack me from the "main line"—bee keeping. Up to the past fall I had always thought it necessary to dispose of my crop of honey as soon as possible, get my bees packed for winter, and get to work at something else, usually apple packing, where I made \$1.50 per day for about 50 days. Last fall, however, I did some thinking and figuring after my crop was harvested. My bees did not come through the previous winter in very good shape on account of keeping some

old "pet" queens, and, after doubling up, I had only 33 colonies with which to start the season of 1909. I attended to them in every way possible, and secured nearly 4,500 pounds of the best honey I ever had, and increased to 46 colonies. Now, the best wholesale price offered me was 9 cents delivered at Toronto, which meant less than $8\frac{1}{2}$ cents, clear of cans, etc. Perhaps at any other time I might have accepted the offer, but last summer, right in the middle of the busy season, I had the audacity to get married, and so, with some little added responsibility on my shoulders, I concluded to devote the autumn to stretching my crop of honey out to as many dollars and cents as possible. I did not fill my old position as

foreman of a gang of apple packers. but, instead, I ordered several gross of glass bottles, with capacities of 6 ounces, 12 ounces and 13 ounces. The latter kind is a fancy bottle, but costs the same as the 12 ounce, i. e., \$3.75, and the 6 ounce cost \$3.25 per gross. I secured a very neat and attractive label for about 75 cents per M.

Commencing about Oct. 1st, I attended the Hamilton market about twice a week. I got a good stand for my rig, and it was not long before people looked for the "honey man" every Thursday and Saturday, and they found him in the same old place. I got 10 cts. for 6 oz.; 15 cts. for 12 oz.; and 18 cts. for 13 oz. bottles. If I had any left at noon I had no difficulty in disposing of them to nearby grocers. Very often the bulk of my load was sold early in the morning to grocers before retail customers arrived. I charged the grocers 95 cts. per dozen for 6 oz.; \$1.50 for 12 oz.; and \$1.65 for fancy 13 oz. bottles.

When it became too cold to stand on the market, I adopted another plan. I went to the city once a week with my three samples in a grip, and canvassed the grocers. I was surprised to find so few stores handling honey. However, I never had any difficulty in securing an order for at least a dozen, and I often got an order for a half gross. I found that the 6 oz. and 13 oz. sizes sold best. After securing enough orders to make a

good one-horse load, I would quit canvassing for that day. Next day I delivered my load. The next week I canvassed another part of the city, and so on, getting around to the different sections every three weeks, when the old customers would be ready to give me another order.

Now for results. I find on consulting my books that I cleared on the market, over the price of the bottles, a little over 15 cts. per lb. on 2,000 lbs., and 13½ cts. on the balance, sold exclusively to grocers, or exactly \$610.50, besides about 200 lbs. used and given away. I might have taken the 8½ cts. offered, which would have amounted to about \$365, and could have made \$75 additional working out, which gives a total of \$440. Besides realizing a much better price for my honey, by staying at home, "I was on the spot," at least three days a week, to attend to any one of the numberless things which need attention during the early fall, such as feeding light colonies, requeening an occasional queenless colony and protecting weak colonies from being robbed.

In the above I have tried to show, from my experience, that it seldom pays to mix anything else with bee keeping; even though the number of colonies is only 33. Besides, I have helped to educate many people to eat honey by introducing it into sections of the city where it was almost unknown.

PALERMO, Ont., Feb. 9, 1910.



Selling Large Quantities of Honey to Grocers and Private Customers.

A. SNYDER.

AFTER reading and re-reading the Review for August, 1910, especially an article written by Fred W. Muth of Cincinnati, Ohio; also

one by Hildreth & Segelken, of New York City, I desire to write an article on marketing a crop of honey.

Both of these firms mentioned have

written that which any producer had best take advantage of, unless—well, I will mention the “unless idea” later. Mr. Muth would have you believe that *all* producers, large or small, would have more money in the long run, or at the end of the selling season, if they would let him handle their goods, and pay him for so doing, than if they sold the goods themselves. He wants you to imitate those who ship to him. Imitating other people don't always cut much of a figure. My plan would be to get your eyes open, and push ahead on your own hook, or good judgement. If everybody should ship *all* their honey to commission houses, the price of honey would soon be so low we would all have to quit the business and look up something else for a living.

Mr. Muth also thinks if you undertake to sell your own crop you will have to trust it out and *never* get your money. I will venture to say there is as much money lost by shipping your honey to commission men as by selling it yourself. Mr. Muth would have you ignore your home market entirely, glut the city markets and force low prices. We would advise just the reverse; protect and work your home market and get good prices.

Hildreth & Segelken start off on altogether different grounds. They admit that they write from the dealer's standpoint. That is all right; but I think that they over reached their limit when they question the integrity of bee keepers. We have dealt with Hildreth & Segelken considerably, both in buying and selling, and have always found them to be gentlemen; prompt and fair in all matters.

If I were to give my own brother advice on turning his crop of honey into money, I would tell him to look after his home market, first of all.

TWO METHODS OF WORKING UP A HOME MARKET.

There are two separate and distinct methods in working one's home trade;

one is to sell to the grocery trade in all towns or cities within reasonable distance, say 50 miles, the other way is to sell from house to house, which might take in cities and surrounding country.

I will start out by saying that I have worked both methods for a great many years, and am still working them. In a few instances I have worked both methods in the same cities at the same time, and never have had but one grocer find fault, and he was a notorious crank. In my experience, the more we educate people to eat honey (and that is what we have to do in selling from house to house) the more honey the grocer sells. After we have told all the people in town all the good things about honey, and have induced them to taste our samples, they will naturally want to have a package, but think Snyder's packages are larger than they care for (we put the honey up in 3 lb., 5 lb., 7 lb. and 12 lb. packages) so they will go to the grocery and get a small package to try. We also put up honey in suitable packages to retail for 10c, 15c, 20c and 25c, and don't you see that the grocer gets this trade which he would not have gotten if we had not educated the people to eat honey? Almost invariably, when a family gets to eating honey, they keep right on eating honey.

IMPORTANCE OF DRESSING NEATLY.

Now, then, let's talk a little about selling to the retail trade. When a man starts out to drum the trade (or just before he starts) he should put on a good, clean, well-fitting business suit, and nice, *clean* collar and cuffs, and keep well shaven. Don't put on some old, dirty suit and slovenly hat, and make yourself look like some back woods pioneer. You can't sell goods while wearing such a rig.

When you go into a store to sell honey, be gentlemanly, and ask for the proprietor or manager, and, if he is busy, let him entirely alone. Just sit down and read the morning paper, which you should have in your side pocket. Wait till such

time as he can see you without neglecting his customers, then go up to him as though you could and would do him a favor. Tell him who you are, and whose goods you are selling, and, while telling him this, open your sample case, take out your samples and stand them on the counter in nice, attractive shape. Don't have them scattered all over the store. Commence talking bees and honey, and, if you are well posted on honey and bees, you are sure to get his attention at once, then you can tell him many things he *never thought of*, and keep right on talking about the different kinds of honey, also the bees, etc. One will soon get so he can talk bees, bees, bees, all day long, or at least long enough to secure an order.

Now let me tell you about the very best *bait* I ever threw out to get attention. It is this: A small, glass, or observatory, one-frame hive, say 5 x 7 inches, or 6 x 8 inches in size. Have this comb containing brood in all stages, honey and pollen, in short, a nice little colony of bees so you can show workers, drones and queen, and be prepared to tell him anything he may ask about. Don't try to make a big display with the bees, just merely set the hive out on the counter, and the bees will do the rest. They will capture the grocer at once, then you can talk *business* to advantage. I have landed many an order in this way.

Now I would like to say something about selling goods on time. A firm that is selling goods all the year can manage to give time, because the drummer gets around often to look after collections, but a honey man sells two or three months to the grocer, and he would do best to sell for cash. The nicest, best and safest way we have ever found to get all the orders we can in a town or city, is by telling our customer that we will *deliver the goods right in his store*; we to pay the freight and sell for cash. We then ship the goods in our own name, go with the goods, hire an expressman to help deliver the goods, and *collect* as we go. If they have no money, *keep the*

honey. It is better than some one's credit who refuses to pay on delivery, Either store the undelivered goods with some one who is likely to want it later, or take it back home.

My purpose is to help (if I can) those who will work up a home market. I have already told about the wholesale grocery trade, and now wish to say something about a retail, or house to house, trade. This last mentioned trade is the *very best* we have ever found.

You would be surprised to see what large amounts of honey can be sold if one will only start out in proper shape. Here comes in the same idea about wearing good clothes. Don't go around looking like a ditch digger or garbage gatherer. Look clean and neat. It pays; besides, it's our *duty*. Any good man or woman ought to be able to work a city of 20,000 people, but they will have to hustle. Let our man go out with samples in suitable packages that they may show and have the would-be-customer look at them, and taste the honey. Try hard to get the children to taste, and nine-tenths of them will say "mama, buy some." We try and deliver once a week. Monday is the best day because the majority of people receive their week's pay on Saturday, and are almost sure to have money on Monday to pay for the honey.

When we start out to sell, we start at one side of the town, and work the street thorough. Then the next street, and so on, till we have covered the whole town. By that time it is time to go over the same ground again. We visit every house, office, garage, shop, etc., but never go into a saloon, *no sir!* We usually take orders for five days, and then deliver on the sixth. If any customer is not prepared to pay, why use them just as well as though they were. We don't any of us *always* have money. Say to them: "We will bring the honey the *next* delivery day."

I might say something about size of packages, price of honey, etc., but that

will be best governed by each dealer.

There is no trouble to get good, nice prices for good, nice goods. Make the same price to every body. We also find it a good investment to advertise in the local papers.

What I have written is more in the line of handling extracted honey than comb honey, yet I see no reason why comb honey cannot be profitably handled under these same methods.

KINGSTON, N. Y., Aug. 2, 1910.



EDITORIAL

Stone is the poorest of all materials used in building cellars, so far as resisting frost is concerned. When used in building a bee cellar, the earth ought to be banked up against it on the outside. Cement blocks are better than stone, because of the hollow spaces in them.

71,000 Pounds of honey from 900 colonies, spring count, increased to over 1,150 colonies, besides selling a car load of bees to Mr. M. A. Gill, last spring—that's the way a letter ends from E. F. Atwater, of Meridian, Idaho. I tell you such reports as that make me feel good—looks as though "something was doing" in our line of business.

Editor of the Review in the Hospital.

The last issue of the Review and this one have been gotten out with the editor 100 miles away, on a cot in the University Hospital, at Ann Arbor, Michigan, suffering from heart and stomach troubles. At present he is able to sit up and walk about a little, and expects to be home before another issue of the Review is printed. Full particulars will be given next month; in the meantime, subscribers will please be charitable regarding all short comings.

A Chapter at a Time is how we Learn our Business.

Soon after I wrote my editorial last May on the marketing of honey, I received a letter from Mr. N. E. France on

the subject. As usual, Bro. France manages to say a great deal in a few words. What he says is worthy a place in the Review, so, here it is:

Dear Friend:

I am pleased you have sounded an important note to bee keeping, in your editorial on marketing honey. I have said many times we as bee keepers have studied our business like reading a book. One chapter at a time; and, so far, the majority have only taken up the chapters of production and handling bees for profit, with profitable marketing *yet to study and master*. We each have our personal locality and circumstances. We each must solve our marketing chapter. One once large honey producer, who has devoted much time to the marketing of honey, has of late devoted all his time to selling tons of purchased honey to consumers, with profit and fast growing trade, now says one thing he wants is to have producers put extracted honey in friction top cans like syrup is sold in, and save cost and repacking. He then acts as middle man between producer and consumer. Certainly one good plan, Local and State Associations of bee keepers can do as Michigan Association, Colorado and several others are doing, and members not worry about marketing. National Association Information Bureau also is another way to help many. This much however is necessary—every producer must sell good quality honey. Color and flavor second. Unripe honey, either in comb or extracted, spoils markets.

Bro. France is correct: A chapter at a time is the way we are learning our business. The chapter on production is not finished, by any means, but there is more to learn, with profit, in the chapter on marketing.

Selected Articles.

AND EDITORIAL COMMENTS.

SPECIALTY AND EXTRACTED HONEY

These Two Make a Team that Will Pull a Load of Profit.

A few years ago it came to me with all of the clearness of a vision that the way to make more money in our business was to "keep more bees," and that this program could be carried out more completely in many localities in producing extracted honey. Since then I have not only preached but practised my belief. A few have been inclined to criticise this course, of abandoning a beautiful pursuit, comb honey production, but it seems others, too, have recognized the changed conditions. For instance, *Gleanings* for September 1st says:

There is plenty of evidence going to show a tendency on the part of comb honey producers to go into the business of raising extracted. The reason of this seems to be that there is not enough difference between the market prices on comb and extracted to warrant a continuation of the production of comb, which really costs more to produce than the market quotations would seem to show.

This is something of an indication that the public is beginning to have confidence in extracted honey. The practical workings of the pure food laws, both State and national, have restored confidence in the product. It is becoming noticeable that extracted has a tendency to rise, while comb has remained almost stationary for many years. This fact has given considerable encouragement to the production of extracted honey. When we consider also that swarming is an unsolved problem in the production of comb honey, and an easy one in the production of extracted, and that the hive and super equipment is much simpler too, it is not at all surprising that there should be a marked tendency toward the rela-

tively cheaper article that apparently yields a larger return for the investment.

The question as to which to produce, comb or extracted honey, is still open to discussion, and conditions will always remain wherein comb honey is the more desirable product, but it is very evident that, in the last few years, a few additional points have developed in favor of extracted honey.

FOUL BROOD.

It may not be an Unmixed Evil to the Specialist.

Foul brood has been looked upon as an unmixed evil to all classes of bee keepers, as a foe to bee keeping in general, but not all who have studied the matter closely are ready to agree with such a conclusion. For instance editor Root spent a few days with his automobile, going about with the inspector, and concludes an editorial as follows:

We have about come to the conclusion that American and European foul brood will eliminate the don't-read-the-paper class of farmer bee keeper. It may take several years before it is accomplished; and while we are sorry to have these people suffer loss, the result will be very salutary to the specialist and progressive farmer bee keeper who read the papers. American foul brood has no terrors for the specialist bee-keeper; but the ignorant and haphazard farmer bee keeper must either burn up or otherwise destroy all his old hives and fixtures. European foul brood is much more difficult to eradicate; but we feel confident that, when we come to know more about it, the expert will handle one as well as the other.

SPECIALTY.

It is now Becoming the Order of the day,
But has Special Requirements.

No one, probably, has worked with more persistence than the Review in trying to induce bee keepers to "keep more bees" and make a specialty of the business. Under the circumstances it is very gratifying to be able to clip from *Gleanings* an item like the following, written by Louis Scholl.

Specialty is the order of the day to such an extent nowadays that it is not unusual for a great many bee keepers to fall more and more in line with this trend towards specialism. Editor Hutchinson, of the Review, has advocated this matter to a great extent, and it has been bearing fruit. His "keep more bees" has been heard far and wide, and is in many a bee keeper's mouth. The writer, although working along those very lines years ago, before he read the Review, has known of the value of specializing in certain lines of work. It enables one to accomplish more with little more expense, bringing in greater returns with a larger profit. But it takes a man with a business get-up to do it. Then it takes a location that will allow it; then a system of management, and the right kind of hives and appliances must be adopted. Some special articles on the latter would be interesting to some of us.

SEALED COVERS.

They may be all Right Towards the South,
but Cushions are Better at
the North.

Almost every fall and winter we have a discussion as to the comparative advantages of sealed covers or cushions over colonies in winter, particularly those out of doors, but it seems that it is largely one of locality; at least, the arguments put forth in *Gleanings* by Mr. J. E. Crane are very convincing. He says:

The discussion on pages 72 and 73, Feb. 1, on absorbents vs. sealed covers,

is one of much interest, showing, it seems to me, that both parties are at least partly right, or that both methods are practical. I have been in the habit when this subject is discussed, to look and see where the opposing parties are located and, so far as I remember, those who prefer sealed covers live much farther south than those who prefer absorbing cushions, with colder winters. Now, it is quite certain that we can winter bees very well, even in this climate, with sealed covers; but my own experience is that we can do better without them. Under sealed covers, I have found the brood chamber quite too wet in spring to suit me; while with absorbing cushions above, the brood chamber is dry and clean. In early spring we always find the cushions damp on top, but never on the under side unless from a leaky cover, and this dampness all dries out long before we take the cushions off in May. I much prefer my surplus moisture to be in the cushion rather than in the brood chamber.

I have no doubt that too much upward ventilation has been given through absorbent cushions. With the mercury at 20° below, there is a strong tendency for the cold air at the entrance of a hive to drive the lighter warm air above the cluster of bees up through the porous cushion. I used to think that clean burlap was the best thing to lay over the frames before putting on cushions, and have made my hands sore rubbing propolis from old cloth before using it, but of late years have found it unnecessary to remove all the propolis. A board laid over part of the brood chamber before the cushion is laid on works well, or two boards laid on top loosely will allow enough upward ventilation to keep the brood chamber dry. Where upward ventilation is given through cushions, only a very small entrance is needed. Two inches long by $\frac{1}{4}$ high is ample, or a $\frac{3}{4}$ -inch hole alone.

Of quite as much importance as warm cushions is a small brood chamber for small colonies. We are successfully wintering small colonies on four Langstroth frames.

From what you say, Mr. Editor, in foot-note, page 121, Feb. 15, I infer that your hive covers come down close upon the cushion. This may make quite a difference, as in our hives there is quite a chamber above the cushion, and some circulation of air; and as soon as the sun warms up in spring the cushions lose all their moisture without taking them off the hives.

Advanced Bee Culture

Is a book of 230 pages—size of page the same as those of the Review. The paper is heavy, enameled book. The pictures are simply incomparable with others in the same line. As Dr. Miller says "they are what might be expected from one **almost daft** in that direction."

It first takes up the subject of Bee-Keeping as a Business; then shows the best method of Making a Start in Bee-Keeping; points out the Mistakes in Bee-Keeping; shows the wonderful Influence of Locality; tells what is the Best Stock and how to Secure it; gives points that will enable a bee-keeper to make a wise **Choice of Hive**; shows the necessity and use of Honey Boards and Queen Excluders, describes the various kinds of Sections and Their Adjustment upon the Hive; has a chapter upon the Arrangement of Hives and Buildings; another on Comforts and Conveniences in the Apiary; tells why, and when, and how, to use Shade for Bees; gives most excellent advice on the Use and Abuse of Comb Foundation; then takes up that most puzzling of questions, Increase, its Management and Control; tells how to best manage the Hiving of Bees; devotes several pages and some beautiful illustrations to Commercial Queen Rearing; follows them up with a Chapter on Introducing Queens, giving one plan that **never fails**; then it takes up the Feeding of Bees; following this is a sort of gathering together of the various features already described; showing their relations to one another in the Production of Comb Honey; the reader is next given the **secrets** of Producing Good Extracted Honey at the least possible cost; after the honey is produced, then its Preparation for the Market and Marketing are discussed, then Migratory Bee-Keeping; Out-Apiaries; House-Apiaries; and Apiarian Exhibits at Fairs are each given a chapter; following these are probably the best descriptions and methods of treatment for Foul Brood that have ever been published; after this comes the question of Wintering, which is discussed in all of its phases. The Influence of Food, Temperature, Moisture, Protection, etc.—33 chapters in all.

Price of the book, \$1.20, or, with the Review one year for only \$2.00.

W. L. Hutchinson, Flint, Mich.

A Few Plain Facts as to Why You Should Join The Michigan Bee Keepers' Association

Two people working together are more than twice as strong as one. This strength multiplies as numbers increase. But numbers alone are not sufficient. There must be ACTION. And this action must be well directed, and with a purpose in view. If a number of people work together to attain a given object, it is next to impossible to prevent them attaining it. Hence if a number of bee keepers, in the form of an association, work together for better market conditions, success is a most certain.

AND THIS IS WHAT WE ARE DOING

This fall the seventh annual booklet has been published. It gives the name, address and honey report of each member. This booklet is then advertised in the bee journals, and sent to all who request it. In this way each member is certain that his name goes before buyers all over the United States. The logical outcome is better markets as each member is brought in touch with more buyers. This is proven by the fact that many of our members now sell as soon as, or before, the honey is ready to ship. A large per cent. have already sold this years crop.

BUT WE WERE NOT SATISFIED TO STOP THERE

No, we went further and compiled a list of 100 buyers with addresses. We wrote each one of them asking what kind of honey they wanted, how put up, and how much. While not all replied, yet of those who did reply, the demand was for over ONE MILLION POUNDS OF HONEY. This list was sent to each member which enabled him to write at once to the buyer who wanted just what he had for sale.

EACH MEMBER WAS ADVISED AS TO MARKET CONDITIONS

The Executive Board then sent out to each member a recommendation as to what should be obtained for honey this year F. O. B. cars at producers station. Reasons for this conclusion were also given. This meant much to the new beginner who did not know what he should ask for his honey, after he had produced it. It also helped the old producer by preventing the new, inexperienced man from dumping his crop on the market at any old price offered.

OUR MEMBERSHIP IS NOT CONFINED TO MICHIGAN

No, we now have members in twelve states. Some of the leading bee keepers in the land are enrolled with us, as well as others who are just starting. Both find it profitable to belong to the Michigan. Our system of finding markets by mail helps all, no matter where they reside.

MEMBERSHIP FROM NOW TO JANUARY FIRST 1912 FOR ONE DOLLAR

That is just exactly what we will do. It is now too late to have your name in this year's booklet, as it is already published, but we will credit your membership to January first, 1912, which will include the next year's booklet. In addition, we will send you at once the list of 100 buyers, putting you at once in touch with new markets, and send you the Executive Board's recommendation in regard to markets.

DON'T FORGET THAT WE ARE GROWING

But the larger we are the more we can do for you. Your individual strength increases in proportion to the number you are united with. That is why we want you with us. And you should not hesitate to come with us. You have worked hard for your honey. Now that you have it, you should not hesitate to put in One Dollar with your brothers to work for better market conditions. Send in your Dollar at once, and get by return mail the buyers' names, the Executive Board's recommendation, and a certificate of membership in the livest bee keepers' association in the United States. Booklet sent free upon application. Address

E. B. TYRRELL, Sec.

230 Woodland Ave.

Detroit, Mich.

Willow Herb Honey

This year we are able to offer our customers a honey that is somewhat of a novelty—that gathered from the great Willow Herb.

This plant is a species of fireweed, resembling, somewhat, the garden phlox, that springs up in the wake of forest fires in a few localities in the extreme northern part of the United States.

In two or three years it is usually crowded out by other plants, but, while it holds sway, it furnishes an abundant yield of the whitest, sweetest honey we have ever tasted. The flavor is mild, but has a delightful suggestion of piquant spiciness.

We are securing a bountiful crop of this honey in Northern Michigan. As usual, we are leaving it on the hives until it is all sealed over and thoroughly ripened—thick, rich and delicious.

We are putting it up in new, 60-pound, square tin cans, and offering it at ten cents a pound—\$6.00 for a can.

We will mail a sample of this honey for ten cents, and the ten cents may apply on any order sent in.

W. Z. Hutchinson
Flint, Michigan

A \$20.00 Queen for Only 40 Cents

The demand for our fine, **Standard-Bred Untested Italian Queens** is increasing rapidly. Read what two of our pleased customers have to say:

George W. York & Co.:—Our white clover lasted only two weeks, and while my average yield of honey per colony was about 40 pounds of surplus, the bees from the queen you sent me have gathered, so far, more than 100 pounds of fine honey. They are hustlers indeed, and the bees are very gentle. **Twenty dollars would not buy that queen.** After this I know where I will get my queens.—G. A. Barbisch, Houston Co., Minn., July 11, 1910.

George W. York & Co.:—I have had a good many queens from you in the past, and have never gotten a poor one.—Rev. Milton Mahin, Newcastle, Ind., July 18, 1910.

One of the above fine queens we send with the American Bee Journal for one year—both for only \$1.40. The Bee Journal alone is \$1.00, so the queen costs you in this way only 40 cents. A queen without the Bee Journal would be 75 cents; 3 for \$2.10; 6 for \$4.00; or 12 for \$7.50. Queens sent almost by return mail. Now is the time to requeen your colonies. Sample copy of the Bee Journal sent free on request. Address

GEORGE W. YORK & CO., 146 W. Superior St., Chicago, Ill.

WHOLESALE

BEE SUPPLIES

RETAIL

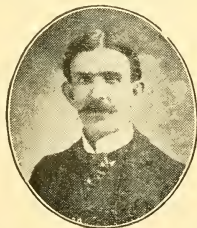
Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to *Gleanings in Bee Culture*—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER MILK BOTTLES

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POUDEUR, Indianapolis, Ind.
859 Massachusetts Avenue.

“DADANT’S FOUNDATION”

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER’S FOUNDATION

and WORKING your WAX for you.

Write us for ESTIMATE on full LINE of SUPPLIES. It will pay you and costs nothing,
RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

Standard Goods

Of the A. I. Root Co. I have them Hives, supers, sections, Foundation, Smokers. Shipping cases: also A. B. C. in Bee Culture. Kept in stock ready to ship. Beeswax wanted. Catalog free.

D. COOLEY, Kendall, Mich.

ITALIAN BEES and Queens and supplies. Root's standard goods. Ask for circular. Also Apiary, El Toro, Calif. 2-10-11t

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 75 cents; tested, 90 cents; select tested, \$1 10; breeder, \$1.65. One-comb nucleus, no queen, 80c. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation.

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

5-10-tf

White Clover Honey

According to my individual taste, no honey is superior to white clover. It has a mild, yet distinctive and delightful flavor. If you have never tasted pure, white, clover honey, there is a treat in store for you.

Here in my little apiary at Flint I have produced about 3,000 pounds of this kind of honey. At this date (July 18) the honey is still on the hives, ripening; but I expect to be extracting it about the time that you receive this issue of the Review. I shall put it up in *new*, 60-pound, tin cans, and offer it for sale at the low price (for this year) of ten cents a pound—\$6.00 for a 60-pound can.

Remember, this will not be the ordinary honey such as you usually get; it will be thoroughly ripened thick, rich and aromatic. If you care to do so you can send me ten cents and I will mail you a sample, and the ten cents may apply on any order you may send in.

I can probably fill your order as soon as it is received—certainly, very soon afterwards.

W. Z. Hutchinson
Flint, Mich.

P. S. Part of this honey is now extracted; and orders can be filled promptly.

Glass Jars Cheap

Last year we got an order from a jobbing firm to furnish a large shipment of honey put up in square, glass jars—one pound and dime sizes. After the bottles had been ordered and made, and were just ready to ship, from Pittsburg, Penn., the order was countermanded. This left us with the jars on hand, and, unless we put forth an extra effort to sell them, it looks as though they would remain unsold for a long time.

The jars are of white, flint glass, plain; that is, have no lettering. The pound size can be used with either corks or paper discs. The latter are much cheaper and really more desirable than corks.

The small size holds five ounces of honey, and is known to the trade as the "dime" jar. The regular retail price, with corks, is \$3.25 per gross, but we will furnish it, with corks, at \$2.25 per gross.

The other size is the one pound jar, and, with corks, the regular price is \$5.75 per gross, but we will sell it, with corks, at \$4.50 per gross, or, with paper discs, at \$3.40.

Goods will be shipped direct from Pittsburg, Penn. Address

Snyder Bee and Honey Co.

Kingston, N. Y.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keeper's Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms, white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 10 to 11c; beeswax, 30c.

Oct. 6, 1910

BLAKE-LEE CO.
4 Chatham Row

CHICAGO—We quote the following prices: Fancy white, 17c; No. 1 white, 16c; fancy amber, 12 to 13c; No. 1 amber, 10c; fancy dark, 10c; No. 1 dark, 9c; white extracted, 7 to 8c; amber, 6 to 7c; dark, 6c; beeswax, 31 to 32c.

July 15, 1910

R. A. BURNETT & CO.
199 S. Water St.

CINCINNATI—The market on comb honey is brisk. Fancy white comb is selling in a wholesale way at 15½ to 16c; fancy extracted at 8½ to 9½c; amber in barrels from 6½ to 7c. Beeswax is in fair demand at \$33 per 100 pounds. These are our selling prices, not what we are paying.

July 26 1910

C. H. W. WEBER & CO.
2146-2148 Central Ave.

DENVER—We quote strictly No. 1 new crop comb honey in a jobbing way at \$3.60 per case of 24 sections, No. 2 at \$5.15. Last season's crop is now all cleaned up. Extracted strictly No. 1 white at 8½c, light amber at 7½c, amber and strained at 6½c per pound. We pay 25c for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASS'N.
F. Rauchfuss, Mgr.
July 19, 1910 Denver, Colo.

TOLEDO The demand for comb honey is thin, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.,
Feb. 19, 1910. Toledo, Ohio

KANSAS CITY—The demand for both comb and extracted honey is good and receipts light; so far we have been able to sell receipts upon arrival. We quote: No. 1 white comb per case of 24 sections, \$3 50; No. 2 white comb, \$3.00 to \$3.25; No. 1 amber comb, \$3.00 to \$3.25; No. 2 amber comb, \$2.50 to \$2.75. Extracted, 7½c per lb. Beeswax 25c to 28c per lb.

C. C. CLEMONS & CO.
July 21, 1910 Kansas City Mo.

CINCINNATI—This market is in a very healthy condition. All grades of honey are selling well. Fancy comb honey brings from 16c to 17c per pound by the single case from our store, and we are selling white extracted honey from 8c to 10c according to the quality and quantity bought. Amber honey from 5½c to 7½c according to the quality and quantity bought. We are paying 29c cash delivered here, or 31c in trade for from good to choice yellow beeswax.

THE FRED W. MUTH CO.
Sept. 6, 1910 51 Walnut St. Cincinnati, O.

NEW YORK CITY—We are receiving shipments from the South and same find ready sale at from 13 to 15c a comb, according to quality. While it is too early as yet to say what the crop will be in the East and Middle West, from the reports we have received thus far, we should say that a good sized crop of white clover honey will be produced. As to extracted, the market is in good shape. As the crop on the Coast is exceedingly short prices are firm, even for what is carried over from last season, as well as for the new crop. New crop southern is arriving quite plentifully, and selling at from 65c to 70c per gallon for common average, and 75c to 85c for choice and fancy. Beeswax firm at 30 to 31c.

HILDRETH & SEGE KEN
July 20, 1910 265 Greenwich St.

Carniolan Queens

	One	Six	Twelve
Untested	\$.75	\$ 4.00	\$ 7.20
Tested	1.00	5.50	10.00

Carniolan bees are natives of the cold Alps Mountains. They are very hardy as the severe winters have a tendency to weed out the weak colonies. They have great wing power. Have bred these bees exclusively for fourteen years and have tried queens from nearly all the queen breeders of the different districts in Northern Carniola. Running for extracted honey, they rarely swarm, if given plenty of drawn comb and kept in the shade.

Wm. Kernan, R. F. D. No. 2, Dushore, Pa.

Buy your honey from members of the Michigan Bee Keepers' Association. Send your address for free annual booklet, giving names of members, with information concerning the honey they have for sale. Address

E B TYRRELL, Sec.
230 Woodland Ave., Detroit, Mich.

Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How These Moving Pictures Were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds, so well as a series of pictures, showing each successive step. Besides all this, Mr. Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will show a scheme for screening a honey house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M. will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet clover seed, *Melilotus Indica*, postpaid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires.**

To encourage old subscribers to secure new ones we will send a one pound package post paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

Yellow Sweet Clover (*Melilotus Indica*), What is it?

This we believe is a very remarkable honey plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and **we now have on hand something like a carload.** The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis* and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

Do Not Delay Ordering

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio

NOVEMBER, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 252.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Nov. 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-tf

Cyprians

Golden Jubilee Queens

It is just 50 years since I began bee keeping in Southern Michigan, and 30 years since I advertised queens for sale from my apiary in Central Michigan; 30 years ago I sent the first Cyprians direct from the Island of Cyprus to America. They are great honey gatherers. Queens bred and mated in Cyprus in 1910, \$5 and \$6 each; home-bred, \$1 each, 5 for \$4.

Frank Benton, Box 17, Washington, D. C.

The flavor of richest apple cider
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A beverage that refreshes and invigorates
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To promote and protect the interests of members.

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The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand and arranged alphabetically (in the largest States), and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

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Conn... 162	Mass... 275	S. C..... 40
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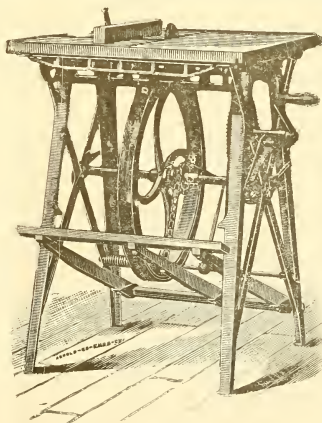
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Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, 75c each; dozen, \$8.00. Tested, \$1.00; dozen, \$9.00. Three-frame nucleus without queen, \$3.00; $\frac{1}{2}$ -pound packages of bees, \$1.00; add price of queen wanted, etc. Send for circular.

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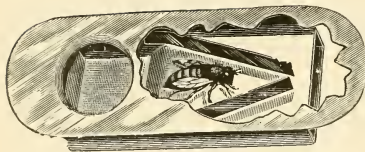
W. Z. Hutchinson, Flint, Mich.

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By return mail. Untested, 65c; 6, \$3.80; 12, \$7.50. Natural Golden from Imported Stock, selected, \$1.00 each. Send for descriptive list. Leaflets, safe plans of introduction of Queens, 15c each. Leaflet plans of increase, 15c each, or copy of both for 25c.

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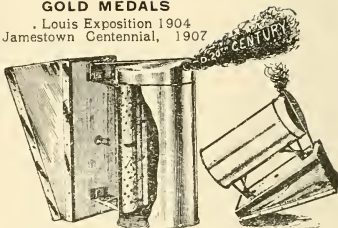
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Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is in one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Price \$1.00; two \$1.60; by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2 00.

We sell Danzenbaker hives and supers with metal **propolis shields**, and anything in **bee supplies at factory prices**.

Send your address and B—friends, for catalogs.

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In a trade recently made, I have come into possession of a letter copying press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at the stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

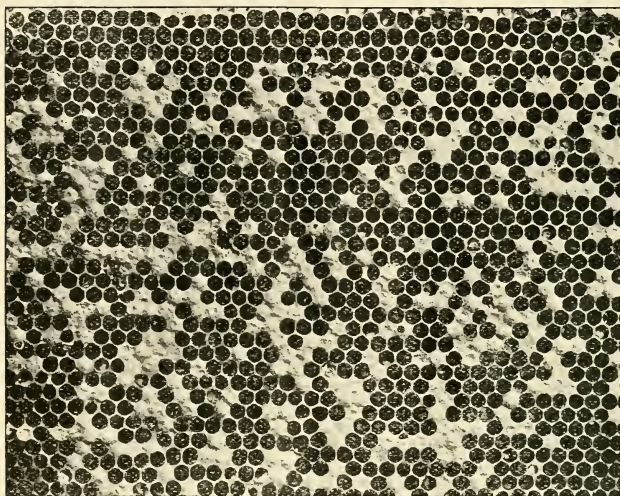
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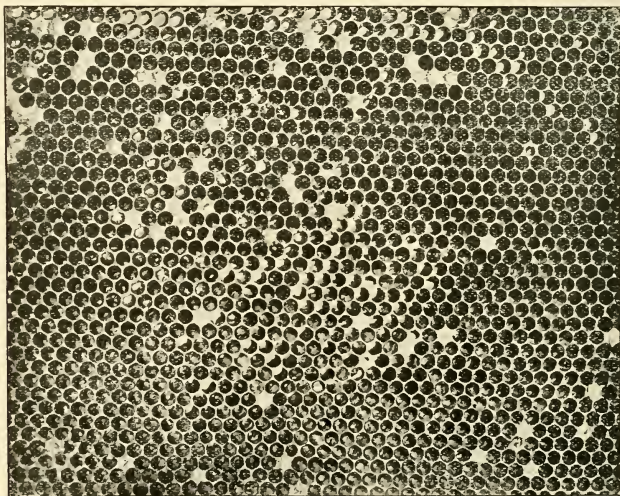
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Typical Infection of Black Brood. Notice Scattered Condition of Sealed Brood.



Early Stages of Infection in a Virulent Case of Black Brood.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

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W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, NOVEMBER 1, 1910.

NO. 11

Black Brood In San Joaquin Valley, California. Its Symptoms and Treatment.

RALPH BENTON.



IN order to fully appreciate the California black brood situation in the San Joaquin valley, a review of the seasonal variation in honey flow with its attendant adapta-

tions of procedure in apiary management will be necessary. Wintering in this locality is reduced to a minimum; the months of December and January being characterized by inactivity on the part of the bees, accompanied by a winter dearth of honey sources. In February and on through March and into April the orange bloom yields, in some locations, quantities of honey. During the latter part of this period other fruits bloom, and the foothills are clothed with an abundance of wild flowers. As might be expected, the bees build up rapidly, in some places store a surplus from the oranges, and

swarm quite universally during April. There are two temptations that confront the apiarist at this time. Firstly, to move to the oranges, a paying practice undoubtedly for the individual, but one, in view of the presence and distribution of disease, fraught with danger to the bee keeping community. And secondly, to make extensive increase for the summer honey flow. This plan of procedure is, in view of black brood, extremely risky, and, furthermore, unless followed up during May and June with regular systematic feeding, quite untenable.

This starving period during May and June, coming as it does after the excessively stimulating early flow of honey, is doubly critical; and, as we shall see presently, is a host to be reckoned with in coping with black brood. The best plan to follow when the bees build up in the spring seems to be not to make increase, but to give the stronger colonies a limited amount of additional space and take steps to hold them over and prevent swarming. Some comb foundation may be given them, but there should not be

very much put out; only as much as will be immediately occupied and drawn out; for we do not favor at any time the placing of foundation on a colony when the bees will not work on it. It should only be put on in sufficient quantities to insure their covering it and immediately drawing it out. If foundation stands in a colony very long it becomes fried out, rounded off, buckeled and coated over with propolis, and never makes so good a

swarming of individual colonies, and contribute an important feature in treating for black brood after the Alexander or a modified Alexander method of treatment.

The factors which cause this somewhat phenomenal honey dearth right in the presence of honey yielding flowers, are to a great degree uncertain. The nights during this period are cool, and a strong prevailing wind sweeps up the valley,



Out Apiary of Louis Sinn on an Alfalfa Range in Tulare County.

comb in the end. If much foundation is given at this time it posits consecutive feeding on succeeding days, a practice the value of which is questionable in light of the economy with which combs may be built at the opening or during a good honey flow.

One of the best aids to the prevention of swarming at this critical time in the spring, is the requeening of the apiary with young, vigorous queens, whose tendency is not to swarm. Furthermore, the cessation of brood rearing activities for a greater or less period attendant upon the operation of requeening will have a direct value in arresting the

not only preventing bees from working but probably drying out, to a large extent, what nectar might be produced. The greatest factor of all, however, is the almost universal practice of cutting the first one or two crops of alfalfa early in order to even up the stand of later crops, and, also, in order to get ahead of the foxtail and Bermuda grass growing in many hay fields as something of a pest.

Varying somewhat with seasons, but usually quite consistently, by the latter part of June the hot weather becomes constant and the nights quiet and warm, bringing on the steady alfalfa honey flow

of July, August and September, not infrequently prolonged into October and November by the blue curl, spike or alkali weed, and the so-called jackass clover. Extracting begins some time in July and any where from one hundred to two hundred pounds surplus per colony may be consistently expected.

THE BEE DISEASE SITUATION ACUTE.

Just how long black brood has been in California is somewhat a matter of speculation. We are of the opinion that



A story without words! California black brood campaign.

it has been here for a good many years. Indeed, there is some evidence to the effect that it was here ten or twelve years ago. However this may be, certain it is here now, and was last year, and has been definitely seen in the San Joaquin valley for the past three or four years, although not definitely established to be black brood similar to that recently prevalent and so destructive in New York, until the epidemic of last year.

The disease first appeared extensively last season in Fresno county in a strip of territory about ten miles long; and has since been moving steadily southward

into Tulare and Kings counties. It is significant that the disease is moving with the prevailing winds, and that in its progress it makes almost a clean sweep of every apiary large and small. The smaller comb honey apiaries of a half dozen colonies or so owned by farmers and non-professional apiarists are found to be infected, but not to so great percentage as the larger apiaries. This is probably due in the first instance to the fact that colonies in these small apiaries are left much to themselves, and furthermore are operated more as individual units rather than collectively as an apiary. In the larger apiaries the percentage of infection runs as high as ninety per cent., and rarely below fifty per cent., except in exceptional cases to be mentioned later, or except in those apiaries which have undergone some system of radical treatment.

The individual colonies affected lose activity; and the bees crawl listlessly about dispersed over their combs. In a typical infection, half or more of the brood is infected and the queen makes no headway; the death rate of the colony slowly but surely depleting its numbers. Little of the infected brood becomes capped, and that which does seem to escape and mature yields not infrequently dwarfed and imperfectly developed bees. There is in the more severe cases a distinct acid and sickening odor to be noticed on opening the hives. The odor can nearly always be obtained by holding the infected frames close to one's face in the direction from which the wind is blowing. Early infection may be detected by the presence in isolated larva of a yellow spot within the curve of the larva as it lies in the cell. This yellow spot enlarges, the larva turns over in the cell, dies, and dropping to the lower side gradually assumes a darker appearance, forming finally the characteristic dark brown or black scale of black brood. Repeatedly in the course of field investigations I have found the presence of both

black brood and foul brood not only in the same apiary but in the same colony at the same time. The foul brood may be distinguished by its extreme ropiness and coffee brown color. Also, if present in sufficient quantity the strong odor of a rank nature is distinctive. In foul brood, as is well known, nearly all of the brood becomes capped; and in many respects the disease is comparatively little to be feared if promptly and carefully handled.

STRAIGHT MCEVOY SYSTEM OF TREATMENT INEFFECTIVE.

The McEvoy system of shaking twice and destroying the old combs together with the comb built in the interval between shakings, has not proved itself to be an effective method of treatment in combating black brood in California. To begin with, this system of treatment, standard for foul brood, posits two conditions: firstly, that the agency of transmission of the disease is the honey of the infected hive and bees; and secondly, that there is a good honey flow on, enabling the bees so shaken to recover themselves. In the situation under consideration neither of these conditions prevail. Although the exact cause of black brood is doubtful, it seems evident that the honey is not the chief, if at all, a channel of infection. Further, from what has been above mentioned in reference to the seasonal honey flow in the San Joaquin Valley, it is easily to be seen that the shaking plan on a wholesale basis is inexpedient during the spring honey dearth. This plan of treatment has been tried on a quite extensive scale, modified by giving the colonies full combs at the second shaking with the result of a very high percentage of reinfection. Whether this reinfection comes from within the colony so shaken or from without, is doubtful. In a region in which nearly 99 per cent. of the apiaries show a large percentage of infection, the opportunity and channels of reinfection from without are so multiplied that it is difficult in the absence of

direct experimental work to arrive at a conclusion on such a point. But, however this may be, it is evident that under existing conditions the shaking plan is not effective, which is really the pertinent question the practical apiarist is wanting to have answered.

ALEXANDER SYSTEM ALONE, INEFFECTIVE.

The system of dequeening for a period of from three to four weeks and then introducing a laying Italian queen, now quite generally known as the Alexander treatment, from the noteworthy success that the eminent New York apiarist attained in his black-brood-control-work, has not proved itself to be entirely successful. The success of the Alexander system again implies two things, namely, that the colonies be strong, and also that there be a good flow of honey on or approaching. The first of these conditions can be, in a measure, brought about by uniting weak colonies, provided the bee keeper takes his apiary in time before too many colonies become greatly depleted in numbers. The second condition so necessary to insure activity in cleaning out infected brood, it is difficult, almost impossible to adequately supply. In those apiaries fed a regular amount of syrup, the bees were stimulated to greater activity and cleaned out infected material in a much better manner, but even then, not as they would have done with a good natural source of honey coming on.

ALEXANDER-MILLER SYSTEM BETTER.

The modification of the Alexander system introduced by Dr. Miller, *e. g.*, that of supplying the dequeened colony with a virgin queen in ten days to two weeks, instead of waiting three to four weeks and then introducing a laying queen, has, for many practical reasons, under California conditions, the advantage of the Alexander system pure and simple. Chief among these practical advantages is that of economy coupled with the inability of Eastern queen breeders to supply the demand for early

bred queens. The California spring in the San Joaquin valley opens three months earlier than the Eastern queen breeder can supply queens, and with the first rays of spring, indications of black brood begin to appear. Because of the shortage of early bred queens, indeed the inability of the Eastern market to supply queens of any kind early enough, it seems advisable for the bee keeper to procure some good breeding stock the

ing fairly good matings, even with a limited amount of breeding stock at one's disposal, can be early in the season better managed than later, by simply preventing the rearing of drones in the apiary except in those colonies to be bred from; and further, by encouraging the rearing of a superabundance of drones of the desired strain through stimulative feeding and the judicious insertion of drone combs into the brood



Infected combs hauled from the apiary and ready for melting up.

fall before, and then plan to dissipate some of the extra energy and activity of his bees early the next spring in multiplying this stock and requeening his apiary before black brood gets much of a start. This will not only supply queens early in the season when they are wanted but will be found to be much more economical and hence within the reach of every bee keeper, big or little. Under the Alexander-Miller system of treatment, the raising of one's own queens becomes simplified in that ripe queen cells, or newly emerged virgin queens, may be supplied queenless colonies directly, thus eliminating all of the work of stocking and establishing nuclei for mating purposes. The matter of secur-

ing nests more especially where there are old queens.

In the actual raising of queens, the common practice of simply distributing brood from the breeding colony to the queenless colonies that it is desired to requeen, is to be discouraged. Such a practice violates several of the canons of the queen breeder. To begin with, the chances are, since the colony has been suffering with black brood, that it is seriously depleted in numbers, and hence not of sufficient strength to properly feed and build down queen cells. Further it has been deprived of its queen and brood for some days and will hasten the development of queen cells to such a degree as to produce a lot of abortive,

runty queens not of the right stamp to head honey colonies, much less to cope with the black brood epidemic. *All queens should be reared at all times in full colonies, preferably in colonies strengthened with the addition of frames of emerging brood from other healthy colonies.*

MODIFIED ALEXANDER SYSTEM A SUCCESS.

A further modification of the Alexander, or Alexander-Miller, system has proved itself more of a success; in fact, when systematically prosecuted throughout the whole apiary and its environs, the modified system about to be described has been found to be adequate and equal to the occasion. With the earliest symptoms of black brood, colonies are dequeened. At the same time all combs containing any signs of diseased



Galvanized iron tank in position for boiling combs.

brood are taken away and immediately boiled up for the wax that is in them. A convenient plan is to throw them right into a large galvanized iron tank of boiling water heated over a fire built in a pit just beneath the can as it stands in the open. A very desirable shape of can is a rectangular can provided with a

partition running crosswise and extending nearly to the bottom. The combs are placed in one side for melting and then with the aid of a forked stick the frames are thoroughly rinsed and pushed under the partition into the clean water of the other side, where they may be further boiled and removed free of wax. To assist in freeing the wax from the residue of cocoons, cast larval skins and other impurities in the combs, collectively and expressively spoken of as "slumgum," five per cent. of commercial sulphuric acid may be added. A stronger solution is not any more effective and is liable to make the wax brittle, deteriorating it in value. A wax press, preferably on the Hatch principle, arranged, however, for pressure under hot water, is the most effective type. The melted comb and hot water may be dipped into burlap and folded in the press, and pressure applied, alternately released, several times before the hot water and melted wax is permitted to run off.

To return to the apiary. In about ten days queen cells should be removed, and again any further infected brood taken away and immediately rendered up. Then either ripe queen cells or virgin queens may be given the colonies thus treated. Or if it is planned to introduce laying queens they should be permitted to remain queenless ten to fifteen days longer. Weak colonies should be united and emerging brood given them. In the absence of a honey flow, systematic feeding for stimulation should be begun. For this it is not necessary to provide feeders, though feeders of the McIntyre type on the rear of the hives, or of the Alexander type under the rear of the hives, will be found convenient. The writer in his experiments in the field went down the rows of the apiary, and raising the covers of the hives, poured in about a half pint of warm syrup (equal parts of granulated sugar and water by weight) in the top story of each colony, just at sundown, to avoid robbing.

We deem the removal and immediate rendering up of combs containing infected brood, and regular systematic feeding, two important features to be incorporated with the Alexander or Alexander-Miller system, if either is to be successful under California conditions. In case of reinfestation after requeening with young vigorous queens of the most resistant stock available, in subsequent treatments during the same year the queens need not be removed, except in the most aggravated cases of reinfestation, but merely caged for ten to twenty days, and the colony in other respects treated as previously outlined, at the end of which treatment the queens are again to be released.

CARNIOLANS TAKE THEIR PLACE BESIDE ITALIANS AS RESISTANT STOCK.

We have mentioned the use of resistant stock in requeening. It must be borne in mind that this term is merely a relative one, for, at present, there are no strains of bees known to be entirely resistant to the brood diseases. There is, however, a noticeable degree of difference of susceptibility to black brood among the different varieties of bees. The common black or German bees are most prone to succumb. Italians, although not generally known to be resistant to certain of the diseases of bees, are, on the other hand, noticeably more resistant to black brood than are the Germans or hybrid-Italians, commonly kept. Of the several strains of Italians experimented with, the golden Italians seemed to be most resistant.

The writer is known to the bee keeping public to be a strong advocate and lover of the Carniolan bees and the gentler varieties generally. It can readily be imagined with what gratification and pleasure it was to us to find that Carniolan bees, when tested side by side with Italians, were found to be equally resistant to black brood, and this predicted trait of theirs thoroughly established by experiment. In fact, it was with interest that we learned of a colony

of Carniolans of the best stock obtainable in this country that withstood the black brood when Italians on every hand were infected and reinfected; and more than this, the colony in question supplied to weak colonies about it some twenty frames of brood during the spring months. It must not be construed that we base our estimate of the resistance of Carniolans entirely upon this single colony, but simply cite it as a striking example of what a blessing a good stock of Carniolans can be even in an Italian apiary. Our real estimate of Carniolan bees has been arrived at through experiments with a large number of queens sent to the infected region, and, as we have said, they take their place beside the Italians as resistant stock, and one more good trait is to be identified with this irresistible and excellent variety of bees for the commercial bee keeper.

THE VALUE OF A SOURCE OF HONEY DURING MAY AND JUNE.

From what has been emphasized in regard to the need of a source of honey in order to make the treatment of black brood effective, and, in the absence of such a source, the necessity of regular systematic feeding, the importance, if possible, of supplying the bees with a source of honey during the spring dearth in the San Joaquin valley is seen. During our field work in May and June last we had this feature in mind and everywhere looked for possible sources to fill in this gap. Our quest seemed not in vain, for in many places, growing, it is true, in a limited amount, yet, nevertheless, growing and slowly getting a foothold, we were pleased to find what we at once recognized as two invaluable sources of honey. We refer to the two sweet clovers, *Melilotus indica*, and *Melilotus alba* respectively. The former commonly known also as "yellow top," blooms a little earlier and is the lesser of the two plants, both in size and importance as a honey yielder. The white sweet clover, melilot or Bokhara clover as it is sometimes called, is a plant worthy of the

consideration of every bee keeper who has the betterment of bee pasturage at heart. This plant is a biennial, quite easy to start, and when once started spreads rapidly along roadsides, irrigating ditches, sloughs, and river bottoms; in fact, anywhere where it can get a

scatter it along roadsides and ditches all over his range and he will get his time and money back with interest a hundred-fold. In fact, bee keepers' associations should seriously consider the purchase of such seed for distribution and broadcast sowing.



Mr. Fred M. Hart, inspector of apiaries for Kings county, on a tour of inspection with the writer.

foothold and have sufficient moisture to germinate. It is not a dangerous weed at all, as it can very easily be eradicated and stock will learn to feed upon it. The honey is a little dark, of a greenish murky color, but of pleasant flavor, and would be an invaluable source of stimulation at the critical time when the present spring dearth of other sources of honey is on. Every bee keeper should purchase some seed, and along in the fall when the rains have begun, about the time when alfalfa is sown, he should

DANGERS OF MIGRATORY BEE KEEPING.

Perhaps nowhere in America is migratory bee keeping so much resorted to as it is in California. It is, we must grant, a most interesting and exciting phase of bee keeping; resulting in many cases, in greatly increased returns to the skillful and well posted mover of bees. But in the present crisis of the black brood epidemic, this individually profitably form of bee keeping should, and must be, curtailed within reasonable limits, in the interest of the local bee keeping public

and the honey industry of California. Several counties have already passed ordinances restricting the moving of bees; and, in fact, debarring the importation of any bees or used bee hive fixtures, etc., from a point from within twenty-five miles of a known infection of black brood. More counties should, we believe, pass such ordinances; and in the case of those counties infected in which there are large areas still free of disease, (many California counties are as large or larger than some of the Eastern states) we would advocate the establishment of quarantine lines. We spent when in the field, a considerable time mapping out the infected area, and such a quarantine line should by all means be established east and west across Kings and Tulare counties, along the south boundary of the present infection. This will include the orange belt south of the line, and prevent the usual influx of migrants from the north to the orange groves of Exeter and Lindsay, and so curtail somewhat the wholesale spread of the disease next and succeeding springs.

NOTES ON THE CAUSE AND TRANSMISSION OF BLACK BROOD.

The cause of black brood has not yet been definitely established; but from what has been said it is readily seen to be a specific disease of a very infectuous

nature. Certain field observations made by us would indicate a rise and fall in virulence suggestive of a life cycle; but nothing definite has yet been arrived at.

Not knowing the cause of the disease, its methods of transmission are obscure. In the infected apiaries every apiary is touched. This we found to be true with two striking exceptions. The two apiaries in question were to the windward of a low chain of hills, and so protected from the prevailing winds bearing southward from the original seat of infection. A little farther to the east there was a gap in the hills, and apiaries to the south and opposite the gap were infected. Out in the valley to the west, infection increased, reaching its height due southeast of Selma and Traver in direct line with the prevailing winds from the original seat of infection. The question naturally raised in one's mind is, "Is the wind a channel of transmission of the infection?" While more data will have to be collected to establish this fact, yet we feel like calling attention to it, and with it to the need of further investigations into the nature and cause of this dreaded disease. This, together with concerted and prompt remedial action on the part of bee keepers, supplemented by the introduction of better and resistant stock, are the lines along which relief must come.

BERKLEY, Calif., Aug. 15, 1910.



Things that Might be Gained by Co-Operation, Advertising and Business Methods.

E. B. TYRRELL.

FRIEND Hutchinson: I read your editorial in May Review, on "Selling the Honey Crop to the Best Advantage," with a great deal of interest. I think you ought to be congratulated on covering the ground so thoroughly. It is certainly worth a care-

ful reading by every progressive bee keeper.

I believe you understand my position on this selling question. I have given the matter a great deal of thought and study, and am satisfied that the only *true* solution to the whole problem is a proper

co-operative effort on the part of the producer. Bee keepers are not so much to blame as at first appears. They are doing the best they know how in a majority of cases, but the trouble is that they know not what to do. The average bee keeper does not produce honey enough to pay to advertise. He is generally located in the country, or in a small town, and when a good yield comes, he has the competition of all the farmer bee keepers around. Their honey is dumped on his market in any condition, at any price. If he decides to ship to the city, the chances are that he knows not where to ship. He instinctively turns to the bee journals and reads the advertisements of the honey buyers. These buyers hear from hundreds of other bee keepers, who, like himself, do not know the condition of the city markets, and the buyer is thus able to buy at a close figure. The bee keeper cannot say "I will take so much," but does say "what will you give?"

Then we have the bee keeper who is developing a home trade in a retail way. The chances are that he will place his price too low, adopt the wrong package, or use poor selling methods. I believe there are hundreds of bee keepers selling honey in a *retail* way at a *wholesale* price. I have done it myself and congratulated myself on the business I was doing. Today I can do better; but what about that new bee keeper who enters the ranks and spoils my market through ignorance? I say he should not be criticised, but helped. He should be instructed how to put up his honey, where to sell, and what price he should get. It is poor salesmanship to ask "what will you pay?" instead of saying "the price on this is so much."

Then we come to the advertising question. Many times it has been said that honey should be advertised. But how? The individual bee keeper can not advertise in a general way. Associations have tried it with but poor success. Let us suppose that we have an association

that is able to spend several thousands of dollars annually in advertising honey. We will say that I am a city resident with no knowledge of honey. I read the advertisement and am convinced. I go out to buy honey. Let us suppose that I buy some of the stuff that is sometimes put up by packers. Do you suppose that I will believe that advertisement again? Again, suppose that I am satisfied with the first purchase, how much chance have I of getting the same thing again? Don't you see where we stand, brother bee keeper?

The value of the honey we produce amounts to a great deal more than the supplies we use. Now pick up your bee journal and see the advertisements of bee keepers' supplies. Now tell me, if you can, where I will find any such amount of advertising in the interest of the man who produces the honey? Something is certainly wrong, brother.

The bee keeper and the farmer stand in about the same boat. He produces the crop, and then he says "what will you give?" He gets his money and then wants to buy his supplies and he says "What will you take?" Rather a jug handled affair is it not?

But it is also true that he and he alone is most to blame. No business could be conducted long if conducted as the bee keeper and farmer conduct theirs. The fact that he succeeds at all is proof that he has a business of great possibilities, if conducted along true business principles. He knows how to produce the article; he does not know how to sell it.

The remedy for all this is the proper organization of the producing class. An association of several thousand bee keepers, each paying only one dollar per year, would furnish capital which could hire at least one man to work for them. Markets could be developed; advertising done and the new bee keeper educated.

Some are probably thinking as they read this, that I said that an association could not successfully advertise honey. So I did, if it is done as so far tried. But

listen. An association having a man on the job could buy up some of that good honey offered cheap by the man who cannot afford to read a bee journal or belong to an association. This honey could be put up in a suitable package, and a *particular brand advertised*. The city man who reads the advertisement, being convinced, would go and buy that particular brand, and, being satisfied, would come back for more. I know this plan is practical for I have tried it in a small way. Again, solicitors could be put to work, and new customers educated. Retail stores handling honey could be canvassed during the summer and early fall, and their orders taken for fall delivery. This can be done by an association, but not by an individual. Markets could be found that are now unheard of by the average bee keeper. Don't you believe that? Well, listen again. Last fall I had about 1,700 lbs. of choice extracted honey to offer. I wrote to a certain firm that I thought used honey, but I did not know what kind, what they paid, or how much they used. I quoted them a price in my first letter higher than what I paid, and I paid a half-cent over market price. I received a reply from them that they were under contract for their supply of honey, but might use mine in addition. They asked for sample. This was sent and my reply from them was an order for the whole lot. I then wrote them

asking if I might figure with them when they were ready to place their next contract. I did not hear from them for a long time, and then they wrote me that they were ready to place their next contract, and asked for an immediate quotation on 10,000 lbs. Upon investigation I found that they had been using a cheap grade of honey, which was entirely suitable for their use, and had been paying as much, if not more, than what they had paid me for the best. Mr. Bee Keeper, this honey was being supplied this firm by the jobber. How much did you get?

No, don't kick the jobber. He is doing just as you are doing, making what he can out of the business, and I don't believe every jobber is getting rich. *You* are the man to blame. As long as you are willing to let the other fellow do the business, you must expect to pay for it.

Right here I want to say that I believe that within the next ten years, we shall see the bee keepers doing, through association, just what I have outlined above. It is in the air. Producers are organizing everywhere. The West has its farm elevators. Michigan has its farmers' societies and fruit associations. These little efforts are springing up everywhere, and it only means *time* when they will be merged into one grand whole for the producing class, the class most entitled to the best rewards.

DETROIT, Mich., May 13, 1910.



The Honey Market and Factors Contributing to The Selling of Honey.

M. V. FACEY.

Continued from October issue.

As a rule, the retailing of his own crop ought not to be undertaken by the large bee keeper, unless he has a special adaptation for the work, or some special reason or facility. Bee keeping is yet open to great advancement; better

wintering; better springing; better methods; better crops; still remain as rewards for the wide awake and progressive bee keeper. A larger investment in bees, handled with proper care, will net him more dollars and greater

satisfaction than he can derive from re-tailing his own honey. It is a very easy matter for a man, while making an extra hundred dollars on his honey crop, to lose two or three hundred dollars through neglect of his bees. This is more especially true since at the very time he is busiest selling his crop he should also be preparing his bees for the best possible wintering. I know a man, who, thus selling honey, neglected his bees, 300 colonies, which were light, until too late for feeding; he received an extra profit upon his honey but a much greater loss upon his bees. Bee keeping is large enough and deep enough and many sided enough to afford scope to the ablest talent. Salesmanship followed as a specialism requires thought and care, and no person can engage very largely in both: if he does, the expansion of either will be at the expense of the other. It is only the exception, or under exceptional circumstances, where this is not the case.

SELLING AT WHOLESALE.

I would advise the large bee keeper, unless under especial circumstances, to sell his honey at wholesale; getting the money all at once he can use it or invest to better advantage, and frequently save more of it than if received in daily smaller amounts; and, the crop being off his hands, he can devote his attention towards preparations for the next year.

As the selling of honey becomes specialized, the price will tend upward. Time was when the bee keeper was almost entirely dependent upon the commission house, and stocks often piled up and laid for months awaiting a buyer, until the owner, discouraged, would direct a sale for whatever could be obtained; and the bee keeper would finally receive from two to three cents per lb., after expenses were deducted, and no person felt any certainty as to the price he would receive; now but a comparatively small amount of honey is handled on commission, and the day is not far

distant when honey will very rarely be consigned for sale. This condition in the past was not the fault of the commission men, but of the *uncertainty of the market*. These men, formerly buying on commission, now pay cash at an advance in price of one to two cents per lb. over former prices.

POSSIBILITIES AND DEVELOPMENT OF THE MAIL ORDER TRADE.

Perhaps the mail order trade may yet become one of the most promising outlets and distributors of honey. Its tendency is to increase the price, as well as to popularize the product. It places only one step between the producer and the consumer, and is thus enabled to pay bee keepers as much for their honey as jobbers often wholesale their honey at; in fact, I have had to buy several carloads of honey from commission houses during the last five years; and I have paid bee keepers as much per pound, and often more, for their offerings than I paid these commission houses, thus eliminating the expense of passing through the commission man's hands; and what I have done, other mail order dealers have also done.

The mail order dealer in honey can safely pay more for honey than other dealers, because the latter have to meet the fluctuations of the market, buying in the fall at a given price, to sell, if still on hand, at a reduction of a cent or more a pound in the spring, while the former has sent out his price lists which remain unchanged through all these variations; thus, I have not changed my prices *once* during the last *three years*. The growth of my business has been very satisfactory, and I am convinced it is now much larger than it would have been if I had been constantly varying my price.

The mail order business is more especially adapted to those who intend to take up the sale of honey as a business. The average bee keeper would probably meet with disappointment, for two reasons; first, by placing his price too low, the wholesale price of his honey

being 8 cts. per pound, he often advertises it at 9 cts. He expects that margin will net him a profit, but finds at the close of the year that the more he has handled the poorer he has become. Second, the bee keeper handling only his own crop, or only a few thousand pounds, places his honey on the market at much greater expense than the larger dealer. His cans are more expensive; liquefying costs more; advertising is less effective in results; thus I find that the expense of putting my honey on the market now to be less than one-half it was three, or four years ago.

When I first commenced building up my trade in honey, I felt called upon to conform my price to that of others offering honey in a like way. People always gladly accepted the drop, but would hold back for the lower price whenever there was a raise. Finally, one of my advertising competitors dropped his mail order price to about the wholesale rate and I saw it was time for me to call a halt on any further meeting of prices. Since then, I have advanced my honey two cents per pound and held it uniform, as above stated. Although the amount of sales was checked when I first made the advance, my profits from the first were largely increased, and it was not a great while until my sales exceeded any former amount. Since then my growth has been even and continuous. Many bee keepers who are selling their stock directly to consumers, are doing it at a sacrifice; sometimes even delivering No. 1 white honey to customers at eight cents per pound, in cans, freight paid to destination; but such competition very quickly falls out of the field. Mail buyers of honey are rather cautious; as between two parties advertising in the same field they are very apt to select the highest priced honey under the natural presumption that it is the *best*. People frequently ask for a cut in price, quoting the offerings of some one else as a reason, but it is generally better to let them go rather than cut the price.

It remains a fact, however, that were it not for the multitude of bee keepers who have been selling and trying to sell honey by mail orders at cut prices, honey would be a cent or more per pound higher than it is.

An advantage the dealer has over the bee keeper in a mail order trade is that the bee keeper's honey may be No. 1 white, or amber, or a mixture of the two, according to the flow of his locality, while the dealer buys such honey as he wants for his trade. He must always be careful to buy the best stock obtainable, and should understand honey thoroughly, and know exactly the effects of blending, as many people like a blended honey best; say of basswood and alfalfa, or basswood and clover, or other blends, and he should put up each person's honey as if his whole trade depended upon it. As soon as the buyer learns that such care is being practised with his orders, you can depend upon both his trade and his influence. If you have to "turn a person down" do it gently and indirectly and as nearly as possible in such a way that he will hardly realize he is refused his request; you will then have that person for your friend and quite likely for your customer.

A great many people use the National association label. I want to protest against this custom. If you are selling the honey by wholesale, you do not need a label, as the buyer will look after that end, but, if you are building a trade of your own you ought to have *your own label*, and it should stand before your customer as of more value than any association label. The association label is a guarantee of purity, it is true, and to a certain degree for quality, but is hardly personal and direct like an individual label. A man's trade is not worth much until the public believes in him, and would rather have his individual word and guarantee than that of any other person or body. His own trade, his own label, his own guarantee, are all of them of the greatest value to himself

and to his customer, because it is his and is known to be strictly gilt-edged, a consumption more easily reached in the honey business than in almost any other, and a very valuable asset when acquired, but it must be slow. On account of the nature of our flows, quite often the label should merely designate the goods as "Pure extracted honey," as some years it is difficult to secure a honey which can properly be labeled as strictly gathered from any especial bloom.

In this line, I would say that much of the discussion relative to honey dew has been injurious to the bee keeper. The agitation was started under the assumption that all honey dew was the excretion of insects. Ten per cent. is supposed to be permissible under the pure food test. If honey dew is unfit for food, ten per cent. admixture is too much, and if ten per cent. is permissible, and the product be wholesome, more might be present and the product would still be wholesome; for it is either a pure food product or it is *not*.

The fundamental fact remains that much of the honey dew is a wholesome food-product, and often of very fine flavor and quality. Mr. Morgan, of Vermillion, So. Dakota, informed me that he sent a number of samples of honey dew to the Pure Food Department for tests, and in every case the returns were that it was pure honey. It candies as does honey, and is often very difficult to distinguish from honey from flowers. Many grades of honey from flowers are less palatable than a good quality of honey dew, therefore I see no reason why it should not be sold as honey according to its flavor and grade.

This digression is perhaps foreign to this article but its treatment and recognition are so intimately associated with the marketing problem that I thought it wise to speak of it. I plead for common sense in its treatment, rather than a technical treatment which will prove a boomerang and eventually impractical.

It was the common opinion only a few years ago that no bee keeper or honey dealer could advertise his product except at a loss. I spend several hundreds of dollars a year in advertising. I have compared results with advertisers in other lines, and have always found them greatly exceeding the average, and very satisfactory. Successful advertising is always judiciously placed. Honey is a product appealing with the greatest force to the home, therefore, our mediums are the home-papers which are read by the wife and the children, rather than by men. A successful advertisement need not be long. It should have no excess of language and should convey the unwritten evidence that you believe in your readers as well as in your goods. It should not be crowded, however and should be so designed as to catch the eye promptly. The localities where we should cultivate our trade should, of course, depend upon our location. Our orders often come from the most unexpected places. Living here in Minnesota, you would hardly expect me to cultivate an Eastern trade, yet I have found it to my advantage to place a large share of my advertisements in the East, and I have a greatly valued trade there, but whether we advertise East or West, North or South, our money will be thrown away unless we properly care for our customers and secure the reputation for square dealing. We pay our money to tell people we have the goods but we stand or fall according to the *quality* of honey we send out, and the way we *do business*.

This is why Friend H. could sell his 10,000 or 20,000 lbs. of honey at 10 cts. per pound, where another man could not have sold the same honey at 8 cts., or even less. I buy honey of many people whose word is all the guarantee I would ask for; I have dealt with others whose written guarantee would be worthless, since they would, while following it according to the letter, evade it in the spirit of its performance.

PRESTON, Minn., July 14, 1910.



EDITORIAL

It is the man, not the business that succeeds.

Prof. E. F. Phillips of Washington, D. C. is to be present at the coming Michigan convention, at Grand Rapids.

The National will try and help another year in the marketing of honey, if it follows out the trend of the discussions at the recent Albany meeting.

Crane is coming to realization of the fact that honey must be retailed out of stores at a *reasonable* price, or not at all, that is to any extent. What did I write you?—S. A. NIVER.

E. B. Tyrrell, of Detroit, the most efficient secretary that was ever elected by the Michigan bee keepers' association, was the unanimous choice of the bee keepers at the Albany meeting, and I hope to see him elected. If he can make things "hum" for the National as he has for the Michigan association, it will be one of the best things that ever happened for the National.

The Advantages of Hospital Treatment.

During the past three years there has been much of the time, especially summers, when my health has been below par—when I have felt dull and listless, and lacking in energy. Local physicians pronounced the trouble a sluggishness of the organs of elimination. Last June there was a fever, followed by chronic diarrhea, and I have done no physical labor since—probably will do very little this fall, as I am just home, weak and emaciated, from a stay of six weeks in the University Hospital, at Ann Arbor, Michigan.

Treatment at the hospital was a revelation to me, especially as regards the science and thoroughness of the examinations. I never dreamed there were so many ways of finding out exactly what ailed a patient. The blood and waste products of the body are examined with a microscope and analyzed. The contents of the stomach are pumped out and examined in a similar manner. By the way, one patient objected to the use of the stomach pump—wanted to know if they could not tell near enough without pumping his stomach. The doctor's reply was: "We don't *guess* at things here; we find out *definitely*." The strength with which the heart beats is measured by means of a tightly inflated collar around the arm, the beating of the artery in the arm causing a column of mercury to rise in a tube, according to the strength of the beat. The beating of the heart is also measured in an other manner. Over the pulse in the wrist a little lever is pressed down in such a manner that every time the heart beats it raises the lever and gives a swinging movement to a little pendulum. Just below the lower end of the pendulum, drawn slowly along by clockwork, is a strip of smoked paper. The swinging point of the pendulum leaves on the paper a wavy line that, in one sense, is a perfect *picture* of the heart beat. The harder the heart beats the farther the pendulum swings, and the higher the "teeth" of the wavy line. The slower the heart beats, the farther apart or longer, will be the waves. Then the body from the neck to the hips is subjected to the most merciless thumping and punching, and almost every inch of surface listened to with a stethoscope. Then the patient is questioned and cross-examined until he might well think he was on the witness stand. In each line

of examination there is a specialist, an expert, each makes his report in writing, and these reports are all gathered together and examined and compared, until, at last, some one is able to put down his finger and say: "Here's the trouble."

At the head of each patient's cot hangs his "chart," upon which is recorded, every two hours, his temperature, pulse and respiration. Every dose of medicine is recorded; every meal and the kind of diet; also how the patient has slept, and, if he has not slept well, the *reason why*. When the doctor makes his rounds he consults the chart, examines the patient, considers the conditions revealed by the previous examinations, and thus there is brought before him, in minute detail, all of the factors of the case. He is able to say: "Considering this patient's ailment, considering what has been done for him, considering his present condition, what shall be his present treatment?" These charts are preserved for reference and as a history of each case.

I was in the hospital five days before I was given any medicine; and all this time they were examining, testing, and deciding upon a course of treatment. It is simply impossible for the ordinary practitioner, no matter how capable or willing, to examine, diagnose and treat a patient with the thoroughness that is employed in a hospital. He has neither the time, tools nor opportunities.

The local physicians "guessed" that my troubles came from a lack of elimination, but the exact experiments at the hospital showed almost the opposite—*mal-nutrition*, or imperfect digestion, arising from a nearly total lack of acid in the gastric juice. There was no stomach-digestion; the food simply dropped down through the stomach into the intestines, which were unable to perfectly digest the food, and there was fermentation, congestion, diarrhea, and a lack of assimilation. The lack of natural acid was supplied by the taking of 40 drops of hydrochloric acid in a glass of

water after each meal, and the digestive troubles gradually subsided.

There was also trouble from a weakened and slightly enlarged heart. When I went to the hospital my pulse was up to 114, and I was unable to sleep nights from a shortness of breath, or labored breathing, like asthma, caused by insufficient heart action—not enough blood was forced through the lungs. For one month I wore a sack of ice over my heart night and day—to slow down the heart action and cool the blood. Medicine was also taken for the same purpose. That trouble has practically disappeared, but the doctors say that my heart will never be strong; that I must carefully avoid all heavy labor or exertion that will put any strain upon the heart. What caused this heart trouble they were frank enough to admit that they did not know.

If any one is seriously ill, and local physicians fail to conquer the difficulty in a reasonable length of time, my advice would be to go to a good hospital if it is possible. If I had done so months ago, yes, years ago, and found out *exactly* what was the trouble, instead of taking somebody's "guess so" for it, it would have saved me much suffering and many dollars.

The Michigan State Convention.

The annual convention of the Michigan State Bee-Keepers' Association will be held at Grand Rapids, Mich., Nov. 9 and 10, 1910, in the Board of Trade Rooms, 97 Pearl St., beginning at 1 p. m., Nov. 9. The headquarters will be at the Eagle Hotel, corner of Market and Lewis Sts., where the evening sessions will be held.

Besides the usual routine business of the convention, the following topics, and in this order, will be considered:

The Aspinwall Hive, a Commercial Success; The Foul Brood Problem; The Pearce Method of Bee Keeping (illustrated); A Mail Order Honey Trade; Uncapping Machines; Developing a Home Market; The Uncapping Knife; Freight Rates; Uniform Sections and Shipping

Cases; and What Smoker do You Use? Why?

It is hoped that everybody who attends will come prepared to take some part in the discussions. A live convention is where each one has something to say. The topics will not be assigned to members not present, for if the one who is expected to open the discussion is not present the topics will be assigned to some one present. For this reason the names of those who are to take up given topics are not published. Here are a few of those who will be asked to contribute to the above program, but remember it is really expected that every member shall contribute something. Editors E. R. Root, George W. York, W. Z. Hutchinson; Hon. R. L. Taylor, Foul Brood Inspector for Michigan; Hon. C. C. Lillie, State Dairy and Food Commissioner; Hon. Geo. E. Hilton, Pres. L. A. Aspinwall, Vice Pres. E. D. Townsend, N. E. France, Manager of the National Bee Keepers' Association; H. C. Ahlers, Jenner E. Morse, and Prof. Frank Benton. And these are not all.

Every bee keeper in Michigan is cordially invited to be present. Only \$1.00 will pay for a membership for one year, or from now to the end of 1911. If a membership is also desired in the National Bee Keepers' Association, add 50 cents, making \$1.50 for the two associations.

Don't forget the place and date—Grand Rapids, and Nov. 9th and 10th—next month.

E. B. TYRRELL, Sec.

230 Woodland Ave., Detroit, Mich.

Condensed Moisture on the Front Hive-Wall During Winter.

According to a correspondent of *Gleanings*, a Mr. C. L. Fisher, of Central Bridge, N. Y., has made a success by having a 7 x 9-inch hole cut in the front of the case in which a hive of bees is packed for winter. The idea is that the moisture will condense on this cold hive-wall, then melt and run out of the entrance on warm days. I agree with

the editor in thinking that the lowering of the temperature in the hive would more than offset any advantage gained. My preference would be to allow the moisture to pass off through packing placed above the brood nest.



Carrying Bees into the Cellar.

As the years go by we learn kink after kink that makes our business more pleasant and profitable. A year or two ago we learned that that mad rush and mix-up that usually accompanies the carrying of bees from the cellar in the spring might be avoided by simply leaving the cellar door open the night before—the bees would be all quiet, and scarcely one would leave the hive as they were carried out. In carrying them into the cellar there is usually less flying than when carrying them out in the usual way; but there is often a cluster of bees on the bottom board, and, when bottom boards are removed for the winter, the disposal of this cluster sets bees to flying. There is a plan, however, of avoiding all of this annoyance. The day before the bees are to go into the cellar, raise up the front of each hive about two inches, and put a block under it. This will cause the bees to leave the bottom board, and the cluster will draw up among the combs; but, if the hives are carried in without the bottom boards, quite a lot of bees will be on the wing before the cellar is reached. The same will be the case, although in a less degree, if the hives are lowered down upon their own bottom boards, unless the entrance is closed so as to exclude the light. It would be all right to let a hive down upon its bottom board, then slip a piece of wood into the entrance, or lay a block in front of it. The only objection is that it is hard work to pick up a hive when the bottom board is loose, as it is necessary to reach down and take hold under the bottom board—it is much easier to lift it by taking hold of the hand holes in the sides. Here is the way I managed

it last fall. A hand barrow was used. Two hives were carried at once, and a man at each end took hold of the handles and walked between them, carrying the barrow and its load. Two bottom boards were prepared by tacking in a half inch strip across the front, where the entrance would come, thus forming a complete rim one-half inch high all around the edge of the bottom board. When a hive was set down upon this rim it was completely closed. Instead of letting a hive down upon its own bottom board, and then lifting the hive and the bottom board, a hive was simply picked up by the hand holes and set down upon the

prepared bottom board. As the bees have retreated up among the combs, and no light reaches them after being placed upon the bottom board, they are inclined to remain up among the combs. Some colonies can be carried into the cellar and set up in place without a bee leaving the hive. The only trouble comes from colonies that are heavy with honey, which causes the bees to cluster lower, so that part of the cluster may reach the bottom board, but there can be no flying until the hive is in the cellar and picked up to be put into place. We put in 40 colonies last fall, using this plan, and not half a teacupful of bees were lost.

Selected Articles.

AND EDITORIAL COMMENTS.

THE HONEY CROP IS LIGHT.

And the Time to Sell is Now, When the Buyers are Hot After the Honey.

The crop of honey for this year has been very light except in a few favored localities. The editor of *Gleanings*, who has exceptional facilities for learning the truth of the matter, writes as follows:

As the season advances it becomes more and more evident that the general crop of honey throughout the United States has been a light one. Apparently it is even lighter than it was last year. A year ago we had a fair yield of Western honey; but in many sections of the great West, especially in California, the crop has been light, almost a failure in some localities. While there has been a splendid yield in some portions of the East, yet these areas seem to be somewhat limited. We know it to be a fact that the buyers are out hustling after honey as they never did before.

Still more important is the advice that he gives, which reads as follows:

Now is the time to get good prices, and it is our opinion that before much of the honey held in reserve is let loose, and

there is not much, the figures will have to advance a little. In the meantime, bee keepers who have honey should not make the mistake of holding too long. Better sell when buyers are hot after it than to wait until after the holidays, when prices always slump.

Never before have so many jobbers and dealers written to us and tried to buy our honey. Some of the offers are so tempting, so near the price that we are getting from our mail order trade, that little would be lost in accepting theirs; considering the quantity that would be taken.

STEAM-HEATED KNIFE.

Some of the Points to be Observed in its Successful Use.

Nearly every one who tries a steam-heated uncapping knife is delighted, but it seems that Mr. O. B. Metcalfe of Mesilla Park, New Mexico, had some difficulties to overcome, as he writes to *Gleanings* as follows:

We now endorse the steam-heated uncapping-knife, but we could not use it for fast work until I got to work and made a regular boiler with flues which would hold in a pressure of perhaps two pounds. On trying to use it at first we used a steam-tight bucket without flues on a single-hole-burner gasoline stove, but could not get heat enough to carry the knife quickly through a solid capped comb of thick honey. The boiler shown in Fig. 3 has an asbestos covering to hold heat, and the one-inch flues which come through it from the bottom to the top are partly covered with strips of tin so the heat from the gasoline stove is forced to spread around a little and enter all the tubes. The water gauge I put on after the boiler went dry once, and the solder was melted. The boiler is made of No. 40 galvanized iron with galvanized iron pipe soldered in it for flues. It consumes nearly a gallon of water per hour; and if an air-cooled engine were used, the boiler would have to be larger than the two gallon size, for in our case we can dip hot water from the engine tank to fill it, and within a minute or so it is boiling again. Refilled with cold water it would take it about ten minutes to boil again. This boiler does not sit flat on the stove, but has the bottom soldered in it about $1\frac{1}{2}$ inches from the bottom to catch the heat so it will not spread out and come up around the outside.

While we have used a steam-heated knife considerably, I don't know how much steam-pressure was employed. I doubt if it was as much as *one* pound. I am at a loss to know why Mr. Metcalfe should have needed so much steam. Possibly it was because his honey was thicker, and, it is likely, *much* colder. Ours had been warmed in a small room by using an oil heater. To generate the steam we used a square gallon tin can with a tube soldered to the screw cap. A water gauge to show the height of the water is all right, but there is another sort of a make-shift plan. Attach a string to the ring in the top of the can, pass it up over a small pulley in the ceiling, above the can, and attach a weight to the end. Let this weight be such that when the water has boiled down until it is only an inch deep in the can, the weight will lift the can off the stove. To replenish the can with hot

water, we kept a pail of water standing on top of the stove in the oven where we warmed up our honey for extracting.

GRAVITY STRAINERS.

Something in Regard to Their Size.

I have never used a gravity strainer, but I have been told that they were used successfully in California. Mr. E. D. Townsend also used one successfully last year, as has already been mentioned in the Review. It seems, however, that not every one has found them desirable, as Mr. O. B. Metcalfe, of Mesilla Park, New Mexico, wrote to Gleanings as follows: We did not find the gravity strainer satisfactory for our work. If any one is figuring on making a gravity strainer I think he would do well to set out a tank of his honey, and time it to see how long it takes to settle. If it takes ten hours to settle as clear as he wants it, and he can use one that holds as much honey as his extractor will throw running all the time in ten hours, it will work. Otherwise, the current will be so swift that it will carry the trash with it clear to the gate. That is, if I am right in my understanding of the method, the tank must be large enough so that a certain amount of honey coming from the extractor must take as long to get to the gate as it would have taken it to settle. I mention this because, if I had read a similar statement, it would have saved me seven dollars and a lot of time.

If I am correctly informed, the honey in the region to which New Mexico belongs is much thicker, more "gummy" than the honey here in Michigan, and might be much slower in clearing itself by gravity, but the theory set forth by our friend Metcalfe certainly seems reasonable. This year we are running our honey into a big tank that will hold a day's extracting, allowing it to stand over night, and canning it the next day. We find that this plan is really a gravity strainer, if we care to make it such, and results in a very uniform grade of honey. Some of these things can be correctly decided only by actual trial.

"Sun Kured" Raisins

"Sun Kured" brand of raisins are the most delicious confection imaginable, being very rich in sugar, and possessing a delightful flavor, distinctly their own. Buy direct from the growers, you are then sure of fresh goods, you also save 75 per cent. on the cost. Price, $7\frac{1}{2}$ cents per lb. Packed in moisture proof boxes containing 25 lbs. \$1.85, 50 lbs., \$3.75; 100 lbs., \$7.25. If they are not the finest raisins you ever tasted in your life, return them and we will promptly refund your money.

C. R. Flory & Co., Lemoore, Calif.

Sept. 1

Willow Herb-Buckwheat

Early-blossoming buckwheat near one of our Northern Michigan apiaries gave to the willow herb honey a slight buckwheat color---enough so that it can't be sold as pure willow herb honey. It is put up in NEW 60-pound cans and offered at 8 cts. a pound---\$9.60 for a case of two cans. Send 10 cts. for a sample and the 10 cts. may apply on an order if you send one.

W. Z. HUTCHINSON, Flint, Mich.

A Few Plain Facts as to Why You Should Join The Michigan Bee Keepers' Association

Two people working together are more than twice as strong as one. This strength multiplies as numbers increase. But numbers alone are not sufficient. There must be ACTION. And this action must be well directed, and with a purpose in view. If a number of people work together to attain a given object, it is next to impossible to prevent them attaining it. Hence if a number of bee keepers, in the form of an association, work together for better market conditions, success is a most certain.

AND THIS IS WHAT WE ARE DOING

This fall the seventh annual booklet has been published. It gives the name, address and honey report of each member. This booklet is then advertised in the bee journals, and sent to all who request it. In this way each member is certain that his name goes before buyers all over the United States. The logical outcome is better markets as each member is brought in touch with more buyers. This is proven by the fact that many of our members now sell as soon as, or before, the honey is ready to ship. A large per cent. have already sold this years crop.

BUT WE WERE NOT SATISFIED TO STOP THERE

No, we went further and compiled a list of 100 buyers with addresses. We wrote each one of them asking what kind of honey they wanted, how put up, and how much. While not all replied, yet of those who did reply, the demand was for over ONE MILLION POUNDS OF HONEY. This list was sent to each member which enabled him to write at once to the buyer who wanted just what he had for sale.

EACH MEMBER WAS ADVISED AS TO MARKET CONDITIONS

The Executive Board then sent out to each member a recommendation as to what should be obtained for honey this year. F. O. B. cars at producers station. Reasons for this conclusion were also given. This meant much to the new beginner who did not know what he should ask for his honey, after he had produced it. It also helped the old producer by preventing the new, inexperienced man from dumping his crop on the market at any old price offered.

OUR MEMBERSHIP IS NOT CONFINED TO MICHIGAN

No, we now have members in twelve states. Some of the leading bee keepers in the land are enrolled with us, as well as others who are just starting. Both find it profitable to belong to the Michigan. Our system of finding markets by mail helps all, no matter where they reside.

MEMBERSHIP FROM NOW TO JANUARY FIRST 1912 FOR ONE DOLLAR

That is just exactly what we will do. It is now too late to have your name in this year's booklet, as it is already published, but we will credit your membership to January first, 1912 which will include the next years' booklet. In addition, we will send you at once the list of 100 buyers, putting you at once in touch with new markets, and send you the Executive Board's recommendation in regard to markets.

DON'T FORGET THAT WE ARE GROWING

But the larger we are the more we can do for you. Your individual strength increases in proportion to the number you are united with. That is why we want you with us. And you should not hesitate to come with us. You have worked hard for your honey. Now that you have it, you should not hesitate to put in One Dollar with your brothers to work for better market conditions. Send in your Dollar at once, and get by return mail the buyers' names, the Executive Board's recommendation, and a certificate of membership in the liveliest bee keepers' association in the United States. Booklet sent free upon application. Address

E. B. TYRRELL, Sec.

230 Woodland Ave. - - - - Detroit, Mich.

Willow Herb Honey

This year we are able to offer our customers a honey that is somewhat of a novelty—that gathered from the great Willow Herb.

This plant is a species of fireweed, resembling, somewhat, the garden phlox, that springs up in the wake of forest fires in a few localities in the extreme northern part of the United States.

In two or three years it is usually crowded out by other plants, but, while it holds sway, it furnishes an abundant yield of the whitest, sweetest honey we have ever tasted. The flavor is mild, but has a delightful suggestion of piquant spiciness.

We are securing a bountiful crop of this honey in Northern Michigan. As usual, we are leaving it on the hives until it is all sealed over and thoroughly ripened—thick, rich and delicious.

We are putting it up in new, 60-pound, square tin cans, and offering it at ten cents a pound—\$6.00 for a can.

We will mail a sample of this honey for ten cents, and the ten cents may apply on any order sent in.

W. Z. Hutchinson
Flint, Michigan

A \$20.00 Queen for Only 40 Cents

The demand for our fine, **Standard-Bred Untested Italian Queens** is increasing rapidly. Read what two of our pleased customers have to say:

George W. York & Co.:—Our white clover lasted only two weeks, and while my average yield of honey per colony was about 40 pounds of surplus, the bees from the queen you sent me have gathered, so far, more than 100 pounds of fine honey. They are hustlers indeed, and the bees are very gentle. **Twenty dollars would not buy that queen.** After this I know where I will get my queens.—G. A. Barbisch, Houston Co., Minn., July 11, 1910.

George W. York & Co.:—I have had a good many queens from you in the past, and have never gotten a poor one.—Rev. Milton Mahin, Newcastle, Ind., July 18, 1910.

One of the above fine queens we send with the American Bee Journal for one year—both for only \$1.40. The Bee Journal alone is \$1.00, so the queen costs you in this way only 40 cents. A queen without the Bee Journal would be 75 cents; 3 for \$2.10; 6 for \$4.00; or 12 for \$7.50. Queens sent almost by return mail. Now is the time to requeen your colonies. Sample copy or the Bee Journal sent free on request. Address

GEORGE W. YORK & CO., 146 W. Superior St., Chicago, Ill.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST, CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER MILK BOTTLES

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTERS S. POUDER, Indianapolis, Ind.
859 Massachusetts Avenue.

"DADANT'S FOUNDATION"

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOOMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER'S FOUNDATION

an **WORKING your WAX** for you.

Write us for **ESTIMATE** on full **LINE of SUPPLIES**. It will pay you and costs nothing,

RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

Standard Goods

Of the A. I. Root Co. I have them Hives, supers, sections, Foundation, Smokers, shipping cases; also A. B. C. in Bee Culture. Kept in stock ready to ship. Beeswax wanted. Catalog free.

OOLEY, Kena Il, Mich.

ITALIAN BEES and Queens and supplies. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-11

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 75 cents; tested, 90 cents; select tested, \$1 10; breeder, \$1.65. One-comb nucleus, no queen, 80c. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation.

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

5-10-11

White Clover Honey

According to my individual taste, no honey is superior to white clover. It has a mild, yet distinctive and delightful flavor. If you have never tasted pure, white, clover honey, there is a treat in store for you.

Here in my little apiary at Flint I have produced about 3,000 pounds of this kind of honey. At this date (July 18) the honey is still on the hives, ripening; but I expect to be extracting it about the time that you receive this issue of the Review. I shall put it up in *new*, 60-pound, tin cans, and offer it for sale at the low price (for this year) of ten cents a pound—\$6.00 for a 60-pound can.

Remember, this will not be the ordinary honey such as you usually get; it will be thoroughly ripened thick, rich and aromatic. If you care to do so you can send me ten cents and I will mail you a sample, and the ten cents may apply on any order you may send in.

I can probably fill your order as soon as it is received—certainly, very soon afterwards.

W. Z. Hutchinson
Flint, Mich.

P. S. Part of this honey is now extracted; and orders can be filled promptly.

Glass Jars Cheap

Last year we got an order from a jobbing firm to furnish a large shipment of honey put up in square, glass jars—one pound and dime sizes. After the bottles had been ordered and made, and were just ready to ship, from Pittsburg, Penn., the order was countermanded. This left us with the jars on hand, and, unless we put forth an extra effort to sell them, it looks as though they would remain unsold for a long time.

The jars are of white, flint glass, plain; that is, have no lettering. The pound size can be used with either corks or paper discs. The latter are much cheaper and really more desirable than corks.

The small size holds five ounces of honey, and is known to the trade as the "dime" jar. The regular retail price, with corks, is \$3.25 per gross, but we will furnish it, with corks, at \$2.25 per gross.

The other size is the one pound jar, and, with corks, the regular price is \$5.75 per gross, but we will sell it, with corks, at \$4.50 per gross, or, with paper discs, at \$3.40.

Goods will be shipped direct from Pittsburg, Penn. Address

Snyder Bee and Honey Co.

Kingston, N. Y.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

NEW YORK CITY—The demand is good for comb honey, principally for No. 1 and fancy white, while the dark grades are rather dragging. Receipts have been quite heavy of late, and are likely to continue so for some time to come. We quote fancy white at 15c, with exceptional lots at 16c; No. 1 14c; No. 2 12 and 13c, dark and mixed 10 to 12c, according to quality. Extracted in good demand at unchanged prices. Beeswax steady at 30c.

HILDRETH & SEGELKEN
82 Murray St.

Oct. 20, 1910

CHICAGO—There is some accumulation of honey which is usual at this time of the year. The prices are not liable to change from those now prevailing. Beeswax is in good demand, all of it that is clean and of fair color brings 32c. Fancy white 17c. No. 1 white 15 to 16c, fancy amber 14 to 15c; No. 1 amber 12 to 13c, fancy dark 11 to 13c. No. 1 dark 9 to 10c, white extracted 8 to 9c, amber 7 to 8c, dark 6 to 7c, beeswax 30 to 32c.

R. A. BURNETT & CO.
199 S. Water St.

Oct. 19, 1910

CINCINNATI—The market on comb honey is very firm, prices ranging in a whole ale way from \$3.75 to \$4.00 per case, for No. 1 and fancy. Off grades are not wanted at any price. Amber in barrels is selling at 7c, in cans at 7½ to 8c. White extracted honey in 60 lb. cans at 7 to 10c. California light amber at 8½c. Beeswax is in fair demand at \$32 per 100 lbs. These are our selling prices, not what we are paying.

C. H. W. WEBER & CO.
2146-2148 Central Ave.

Oct. 19 1910

DENVER—We quote strictly No. 1 new crop comb honey in a jobbing way at \$3.60 per case of 24 sections, No. 2 at \$3.15. Last season's crop is now all cleaned up. Extracted strictly No. 1 white at 8½c, light amber at 7½c, amber and strained at 6½c per pound. We pay 25c for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASS'N.
F. Rauchfuss, Mgr.
Denver, Colo.

July 19, 1910

BOSTON Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 10 to 11c; beeswax, 30c.

BLAKE-LEE CO.
4 Chatham Row

Oct. 6, 1910

TOLEDO The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.
Feb. 19, 1910. Toledo, Ohio

KANSAS CITY—The receipts of comb are liberal, demand fair; the receipts of extracted are light, demand good. No. 1 white, \$3.25 to \$3.35 per case of 24 sections; fancy amber, \$3.00 to \$3.25; No. 1 dark, \$2.50 to \$2.75; white extracted, 7½ to 8c per pound; amber 7c; beeswax 25c.

C. C. CLEMONS & CO.
Oct. 20, 1910 Kansas City Mo.

CINCINNATI—The demand for strictly fancy comb honey is very good and we are selling at 16½ to 17c by the single case, and some cheaper in a wholesale way. Fancy white extracted honey in 60 lb. cans, two in a crate, at from 9 to 10c; amber honey from 5½ to 7½c per pound, depending on quality and quantity; good, choice, bright yellow beeswax we are paying 28c to 29c and sometimes 30c per pound delivered here.

THE FRED W. MUTH CO.
Oct. 20, 1910 51 Walnut St. Cincinnati, O.

Carniolan Queens

	One	Six	Twelve
Untested	\$.75	\$ 4.00	\$ 7.20
Tested	1.00	5.50	10.00

Carniolan bees are natives of the cold Alps Mountains. They are very hardy as the severe winters have a tendency to weed out the weak colonies. They have great wing power. Have bred these bees exclusively for fourteen years and have tried queens from nearly all the queen breeders of the different districts in Northern Carniola. Running for extracted honey, they rarely swarm, if given plenty of drawn comb and kept in the shade.

Wm. Kernan, R. F. D. No. 2, Dushore, Pa.

Buy your honey from members of the Michigan Bee Keepers' Association. Send your address for free annual booklet, giving names of members, with information concerning the honey they have have for sale. Address

E. B. TYRRELL, Sec.
230 Woodland Ave., Detroit, Mich.

ROOT'S GOODS

For Western Pennsylvania. Liberal early order discounts. Gleanings and choice queens

GIVEN AWAY

Write at once for circular. Time is limited.

GEO. H. REA, Reynoldsville, Pa.
Successor to Rea Bee and Honey Company

Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How These Moving Pictures Were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds, so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will show a scheme for screening a honey house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M. will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet clover seed, *Melilotus Indica*, post paid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires.**

To encourage old subscribers to secure new ones we will send a one pound package post paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

Yellow Sweet Clover (*Melilotus Indica*). What is it?

This we believe is a very remarkable honey plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and we now have on hand something like a carload. The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis* and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

Do Not Delay Ordering

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio

DECEMBER, 1910



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 254.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Dec. 1st, 1910

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Clubbing List

I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1 75
American Bee Journal, (new)....	(1 00).....	1.75
Canadian Bee Journal.....	(1 00).....	1.75
Ohio Farmer.....	(1 00).....	1.75
Farm Journal (Phila).....	(.50).....	1.20
Rural New Yorker.....	(1 00).....	1.85
The Century.....	(4 00).....	4.50
Michigan Farmer.....	(1 00).....	1.65
Prairie Farmer.....	(1 00).....	1.75
American Agriculturist.....	(1 00).....	1.75
Cou'try Gentleman.....	(2 50).....	3.15
Harper's Magazine.....	(4 00).....	4.10
Harper's Weekly.....	(4 00).....	4.20
Youths' Companion.....(new)....	(1 75).....	2.35
Cosmopolitan.....	(1 00).....	1.90
Success.....	(1 00).....	1.75

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

Wanted

Early orders for the Old Reliable Bingham Bee Smokers. Address

T. F. Bingham, Alma, Mich,

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of members.
To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

President.

W. D. WRIGHT, Altamont, N. Y.

Vice-President.

LOUIS SCHOLL, New Braunfels, Texas.

Secretary.

N. E. FRANCE, Platteville, Wis.

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G. M. DOOLITTLE, Bordino, N. Y.

R. A. HOLEKAMP, St. Louis, Mo.

R. A. MORGAN, Vermillion, So. Dak.

J. E. CRANE, Middlebury, Vt.

E. F. ATWATER, Meridian, Idaho

Annual Membership \$1.00.

Send dues to Treasurer.

Names of Bee-Keepers TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand and arranged alphabetically (in the largest States, and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky..... 182	N. C..... 60
Ark..... 82	Kans..... 350	New Mex. 54
Ala..... 80	La..... 38	Oregon... 106
Calif... 378	Mo..... 500	Ohio..... 130c
Colo.... 228	Minn... 334	Penn..... 916
Canada 1200	Mich... 1770	R. I..... 46
Conn.. 162	Mass... 275	S. C..... 40
Dak.... 25	Md..... 94	Tenn..... 172
Del.... 18	Maine 270	Tex..... 270
Fla.... 100	Miss... 70	Utah..... 68
Ga..... 90	N. Y.... 1700	Vt..... 205
Ind.... 744	Neb..... 345	Va..... 182
Ills... 1375	N. J.... 130	W. Va.... 178
Iowa.. 800	N. H.... 158	Wash.... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich.

Ye who are in need of Honey write to us for prices. Samples 10c.

We have the following fine honey to offer:

Extracted Honey

Orange Blossom
Sweet Clover
Florida Amber

In crates holding two 60-pound cans

Comb Honey

Strictly Fancy Comb Honey
Also Fine Comb Chunk Honey

The Fred W. Muth Co.

51 Walnut St.

"The Busy Bee Men"

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

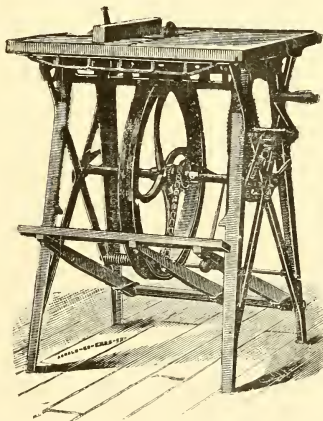
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

351 Ruby Street
Rockford, - Illinois



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

HONEY WANTED

When you have any to offer, let US hear from you. If it is comb honey, state how it is put up and the grade; if it is extracted, mail us a sample and state your lowest price. delivered Cincinnati. We can use any amount, and are always in the market.

C. H. W. WEBER & CO.
2146 Central Avenue Cincinnati, Ohio.

"Falcon" Foundation

None better. Strong, firm and clear. No acids used. Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of BEE-KEEPER'S SUPPLIES.

Early order and quantity discounts. Catalog free.

W. T. Falconer Mfg. Co.
Jamestown, N. Y.

CLUBBING OFFERS

Everybody knows about the Bingham smoker. The Conqueror size gives sufficient smoke, and is as good as a larger size, except that it needs filling a little oftener. The price, postpaid, is \$1.00, but I will send the Review one year and a Conqueror for only \$1.75.

Twentieth Century Smokers have a diameter of $3\frac{1}{2}$ inches, are 7 inches deep, have a double draft, double walls lined with asbestos, a hinged, one-piece cover, and the bellows is fastened on with ribbed steel brackets. The price, postage paid, is \$1.25, but I will send one with the Review one year, for only \$1.75.

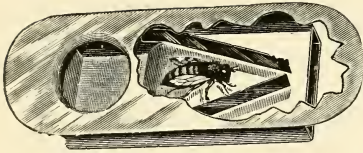
Advanced Bee Culture is a beautiful book, delightfully written, neatly printed, lavishly illustrated and handsomely bound, but, of greater importance, the reading and heeding of its contents will put any practical bee keeper on the high road to success. A new edition will soon be out. It will be largely re-written and much new matter added. Price \$1.00, or the Review one year and the book for only \$1.90.

A good fountain pen is a great convenience, and the Parker certainly fills the bill. I have carried one for years, and I *know*. It does not leak and daub the fingers, while the "lucky curve" feature makes the point always inked, ready for business. The \$2.00 pen is exactly as good as any pen that is made; the higher priced pens simply having more fancy handles. For \$2.50 I'll send the Review one year and a \$2.00, Parker, gold fountain pen.

The Advanced Bee Veil is the most satisfactory veil that I have ever worn. It is not tucked inside the collar, but is fastened and held down firmly, by a cord, out on the shoulders, several inches from the neck, thus making it simply impossible for the bees to sting the neck through the veil, as is the case with an ordinary veil. Price of the veil is 60 cents, but I'll send the Review one year, and the veil, for only \$1.50.

In my estimation, few apicultural writers are the equal of E. D. Townsend of Michigan. He has had a long, wide and successful experience, and knows how to tell about it in that plain, simple, straight forward manner that is so easily understood. I was more than delighted when I learned that he had written a book on bee keeping. While it is especially for beginners, it has much of value in it for the veteran. The price of the book is 50 cts. or I will club it with the Review one year for \$1.25 for the Review and book.

W. Z. Hutchinson
Flint, Mich.



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

Only 25c Per Case.

60-lb. empty tins, two to a case, used but once, as good as new.

G. H. W. WEBER & CO., Cincinnati, Ohio

6-10-tf

For Sale.

300 colonies Italian bees in 8-frame, dovetailed hives with Hoffman frames and straight combs; 1000 supers in good shape, 400 empty 8-frame hives in good shape, bees located in good alfalfa and sweet clover district; wish to sell on account of health. Make us an offer, cash only.

H. H. Hayward, Loveland, Colo.

125 Grant Ave.

Loveland Lbr. Co



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive

PATENTS START FACTORIES

We Secure Patents. **NO FEE IF WE FAIL.** Start right. Free book—How to obtain, finance and promote patents. Send sketch or model for free search. **FARNHAM & SUES, Pat. Attys., WASHINGTON, D. C.**

Hand's HANDSOME HUSTLERS

Are a superior honey gathering strain of hardy Northern-bred three-band Italians. The Hand system of queen-rearing produces queens of the highest development. Every queen a breeder, and warranted to produce large beautifully marked bees. Warranted, 75c each; dozen, \$8.00. Tested, \$1.00; dozen, \$9.00. Three-frame nucleus without queen, \$3.00; ½-pound packages of bees, \$1.00; add price of queen wanted, etc. Send for circular.

J. E. HAND

Birmingham, Erie Co., Ohio.

FOR SALE 100 hives bees in two story standard hives \$5.00 per hive f. o. b. station. Box 545, San Antonio, Texas.

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

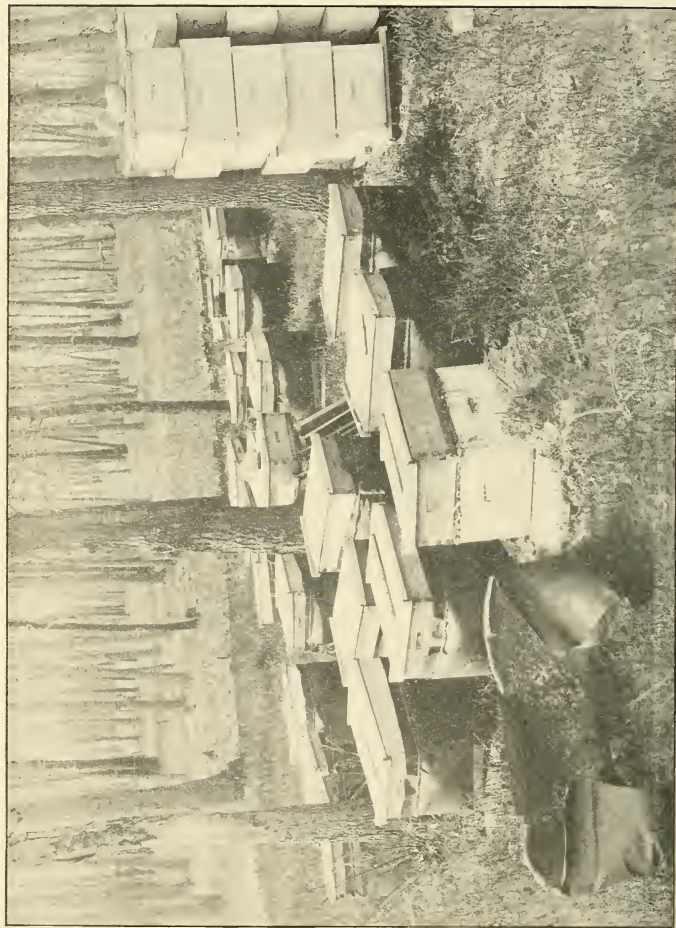
In a trade recently made, I have come into possession of a letter copying press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.

Cyprians Golden Jubilee Queens

It is just 50 years since I began bee keeping in Southern Michigan, and 30 years since I advertised queens for sale from my apiary in Central Michigan; 30 years ago I sent the first Cyprians direct from the Island of Cyprus to America. They are great honey gatherers. Queens bred and mated in Cyprus in 1910, \$5 and \$6 each; home-bred, \$1 each, 5 for \$4.

Frank Benton, Box 17, Washington, D. C.



Spring Protection, as Given in the Review Apiary, at Flint.

One hive in the foreground has just had the packing removed.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIII.

FLINT, MICHIGAN, DECEMBER 1, 1910.

NO. 12

Story of the Season. Protection; Feeding; and Securing the Harvest.

W. Z. HUTCHINSON.

LAST winter I had 40 colonies in a side-hill cellar here at Flint. They wintered perfectly. In the spring it seemed as though they had simply been set into the cellar over night.

About the middle of March the weather turned warm, and, for several days, bees in the open air flew freely. On the 18th of March my 40 colonies were set out upon their summer stands. In three days they were gathering pollen.

WHEN TO GIVE SPRING PROTECTION.

When bees are first set out in the spring they need no protection. They have little or no brood, and can protect themselves by clustering. If the weather continues warm for two or three weeks, the combs fill up with brood; then, if there comes cold weather, the bees will, of course, cluster, when all brood outside of the cluster will perish. If the weather turns cold soon after the bees are set out, there is no need of giving the bees any extra protection; but if it continues warm, *early in the season*, then it is a safe thing to give extra protection

against the "squaw winter" that may come.

SIMPLE AND INEXPENSIVE PACKING.

As the weather *did* continue warm last spring, at the end of two weeks I went at it and gave my bees extra protection. This was done in a very simple and cheap manner. On top of each hive, next to the tops of frames, was spread a piece of heavy rag carpet. On top of the carpet was set a shallow super having a piece of wire cloth, the size of the super, tacked to its lower edges. The super was filled half full of sawdust and planer shavings, and the cover to the hive placed on top of the super. This gave the top of the hive, the most important part, most thorough protection.

To protect the sides of the hive, a strip of tarred felt, about 15 inches wide was wrapped around the hive. It was long enough to go around the hive, and lap eight or ten inches. It reached to the ground, and lapped two or three inches up on the sides of the super.

The tarred felt was kept in place by

tying two pieces of wool twine around the hive, outside the felt. One string was put around near the lower edge of the hive, and the other near its upper edge.

The lower string was put around first, then, before putting on the upper string, sawdust was poured down inside the felt, between it and the hive. The lower string kept it from running out, and the upper string drew it snugly up against the sides of the hive. The thickness of the sawdust packing averaged about two inches. The bees were well packed and protected, yet it was easy to examine them by simply lifting off the super.

I had a stock of full combs of honey, about two to each hive, and, during the warm weather the colonies were all examined, and given plenty of stores of sealed honey.

The last half of March and the first half of April were warm and balmy—really May weather; and how the bees did boom. How they did rear brood, and how the stores did disappear. Some of the colonies actually "hung out" just as they do the first of June. But I did not worry any. They had plenty of stores and were amply protected. I actually enjoyed seeing them boom even at this unseasonable time of the year, as I knew that I was able to take care of and use to advantage, all the bees they could rear, and of all the brood they might start. I felt sure, however, that I would have adverse weather to contend with. But I was ready for it, and it is well that I was ready, as it came and lasted, off and on, for nearly six weeks. Snow, and rain, and cold, day after day, then sunshine for a day or two, then more rain. Fruit bloom came out and went with not more than three or four days in which the bees could work. I stood by the bees as a physician stands by a patient who is seriously ill, and saw to it that they lacked for nothing.

HOW TO ADJUST THE ALEXANDER FEEDER.

Finally it became so late, along in May, that I felt safe in removing the side

packing; especially as every hive was jammed full of bees. The reserve of sealed combs of honey had all been used, so I put an Alexander feeder under each hive and began to feed sugar syrup. By the way, in using the Alexander feeder there is a better way of putting them under the hive than that usually employed. Ordinarily, the feeder is fastened to the back of the bottom board, level with the top of the rim upon which the hive sits. This brings the bottom of the frames down in contact with the feeder, and, in handling the frames bees are often crushed between the frames and the feeder. Here is my plan: Turn the bottom board around, end for end, so that the front end of the bottom board where there is no strip of wood forming the rim upon which the hive sits, is at the back of the hive, then fasten on the feeder level with the top of the *bottom board*, instead of with the top of the rim, and, by the use of strips of wood make a temporary rim out over the feeder. In fact, this temporary rim can be made to fasten the feeder to the bottom board. This plan leaves a bee space under the whole length of the frames.

MAKING THE SYRUP.

I made the syrup in a tall tin can holding about 10 gallons. I simply stirred the sugar into cold water, until no more sugar would dissolve. It was then drawn off through a honey gate into a sprinkler can with the rose removed, and carried around and poured into the feeders.

My feeders hold a quart, each, and I found that a full, strong colony, in a ten-frame hive, would pretty nearly use a feeder full in two days. By this I mean consume it in brood rearing, and in feeding the mature bees.

The most of the colonies were soon in such a condition that I could put an upper story of combs on each. The queens at once climbed into these upper stories and began business there.

Soon these colonies were populous enough to divide, and here is how I did

it: Most of the brood was placed in the upper story, a queen excluder put between the two stories, and the queen put below. In five or six days, most of the brood in the upper story was sealed over, when this upper story was simply picked up and placed upon a new stand. Of course, most of the old bees returned to the old stand, but as the brood was nearly all capped over there was no loss of brood. About the second day, after all the old bees had gone back to the

sweetest of music, the roar of bees coming in loaded with nectar. It was the middle of June, and white clover was in bloom. It was astonishing how soon the combs filled up with honey, and the colonies were ready for upper stories. By the use of feeding, empty combs, and laying queens, I doubled my stock before the opening of the honey harvest, and all were as good and populous as ordinary colonies usually are at this time.

My supply of empty combs was ex-



Review Apiary During the Honey Harvest.

old stand, a laying queen, bought from some Southern breeder, was given to the new colony. The new colonies thus formed were fed the same as the old ones.

Once feeding is begun it must be continued until honey comes in from natural sources. Two barrels of sugar had been used in this little apiary, and I was contemplating the purchase of more, when I went up to the yard one afternoon to feed, and my ear was greeted with that

haunted, and I used full sheets of foundation in wired frames. In putting on the first upper story, I took five combs from the lower story and put them in the upper story, then, in each story, the combs of brood were alternated with foundation.

When a third story was needed, the same plan was pursued, that is, combs were raised from the lower stories and alternated with combs of foundation.

After the honey harvest was on, a few

queens were reared and some more increase made by taking frames of bees and brood from the most populous colonies.

THE SURPLUS AND INCREASE SECURED.

At the close of the season my 40 colonies had been increased to 95, and 3,000 pounds of honey extracted, and this during a season when many bee

keepers did not secure half a crop, and some not any, because they allowed their colonies to run down during the long cold spell in April and May. You see it is possible to secure a good crop of honey, by proper management and attention, in a season when, if left to themselves, bees would store no surplus.

FLINT, Mich., Nov. 8, 1910.



Organization and the Advertising of a Special Brand Would Raise Prices.

W. J. LEWIS.

WE have carefully read your editorial in the May Review on the subject of "Selling the Honey Crop to the Best Advantage."

The keeping of bees is a side line or rather a hobby with us, but we have learned that it is a harder matter to get what we consider a fair price for our honey than it is to produce it. We have devoted considerable time and endeavor to learn why honey does not bring a better price, and our decision is that it is largely the fault of the producers that they do not receive more for their product. You fairly express our view of the subject when you say "the indifference exhibited by some of our producers in disposing of their honey is certainly exasperating," only we would apply this to nearly the whole bee keeping fraternity instead of "some producers."

MARKETING SELDOM DISCUSSED AT CONVENTIONS.

We received and read carefully reports of the convention of the National Bee Keepers' Association. If there is any thing in the last report of any discussion on how to obtain a better price for honey, we fail to recollect of reading it. Much is said on how to produce big crops, keep down and eliminate disease, manipulate hives, keep down swarming, etc., in

short, everything imaginable is done to get as much out of faithful little workers as possible, but nothing as to how to get a fair price for the valuable food they produce. We have never attended an annual meeting. We have wished to do so for the past four years, but something always happened to prevent our attending, but one thing is certain, when we do attend, that meeting will not pass without a word on the subject.

We read the reports of the convention of the producers of a certain line of manufactured goods. The subject of how and where to place their goods and how they should be advertised and sold so as to bring the greatest price, is created at length, but nothing of this kind ever seems to have been taken up by the National Association of Bee Keepers.

Forty years ago we remember of seeing a country store keeper shoveling butter from a lot of old tubs into barrels in order to ship it to market. Good and bad went into the same barrel, and by the time much of it reached the city market it was consigned to the soap factories. How different now. Single pound packages, put up in tight, germ-proof wrappers, advertised and sold under a certain brand which is extensive-

ly advertised. The result is butter that has doubled in value, while the honey, the richest food of the two, has *fallen* to less than *half* its former value!

ORGANIZATION AGAINST ORGANIZATION.

If the bee keepers would organize and work for better prices they would surely succeed. Time was when the individual was in competition with an individual, but not so now. It is organization against organization. It seems the only way to succeed in these days of combinations. As an illustration of this, we will cite a case that came under our observation last winter. The large shippers and distributors of milk in this city had a meeting and raised the price of milk. Very soon after this the dairy men's association convened and demanded that they receive for their products one-third of the retail price of milk; if not, they would start milk depots of their own in this city. They got what they wanted, and we think they acted right.

Under existing conditions it is impossible for a single product of honey to get a fancy price. The product is dumped in on the commission man who takes what he can get for it. There is no life to the trade. No advertising of *special* brands, which would fix a price for fancy goods. No name of noted producers that would guide the public, but we have demonstrated to our own satisfaction that all this *could* be changed.

At the present time we receive for honey at least 25 per cent. more than the market prices. Eight or nine grocers sell our product, and they will not handle any other at *any* price. Every section or can has our personal guarantee. Suppose eight or nine hundred grocers were induced to handle a special brand, well-advertised and guaranteed to be pure. The trade of the city would be revolutionized. Any other city would be the same. These days people eat what they are told to by the advertisements they read. We have a friend who until recently was in the baking business. He spent as high as \$5,000 a year advertis-

ing his bread. He built up a large business and grew wealthy. Others who never advertised probably made as good or better bread than my friend, but their business will always remain small.

One morning as we came to our office we purchased five cents worth of chewing gum. Not that we wanted to use the vile stuff, but to see what it brought per pound. The five little pieces weighed just one ounce, which shows that we paid at the rate of 80 cents per pound. Why do people pay such a price for a delusive poisonous sweet, instead of using honey to satisfy the appetite for the sweet. Just because it is advertised and the honey is not.

Alexander, in his book, says that the benefits of organization among the bee keepers for better prices would be great, "but it seems that there is none in our ranks capable of forming us together" or words to that effect. Now, we do not wish to harshly criticise the writers in the bee journals, but it seems to us that there is much written of a scientific nature that is of no particular interest or benefit to the great army of bee keepers. Doolittle says there was a time when he gave one pound of his honey for one pound of butter, but now he has to give two of honey for one of butter, and he wonders why these things are so. One reason is that the men who have elevated the price of butter do not seem to care whether the cow is a Reflex Animal or not, neither do they spend their time delving into her physiological attributes, nor waste pages discussing the subject whether her kick would kill or cure a rheumatic.

Glucose is the arch enemy of honey, so is Oleo of butter. The producers of butter have educated the public to know that there is a wide difference between Oleo and butter, and have compelled the producers of Oleo to sell it for just what it is. They have said that Oleo is not butter, and also that cows cannot be fed on slop and brewery swill and produce the rich life laden milk and butter that

comes from the flowers, herbs and grasses of the field. The producers of honey must show the public that the ordinary form of sugar is a dead food which cannot possibly equal honey with its millions of life giving and stimulating bacteria to every ounce, while glucose in its various forms is a poison to be shunned.

ESTABLISHING AND ADVERTISING SPECIAL BRANDS.

Now, as we have ventured to criticise, we may be asked how could conditions be bettered? We will suppose that we take this city. It being understood that the large producers of honey were organized and they would send their output to a store house previously established. Then we would grade and establish a brand, solicit and induce eight or nine hundred grocers to handle the goods the same as we have eight or nine grocers selling *our* small output. A large, dry basement could be used for a depot, and some of the idle bee men would make the best solicitors during the winter months. Suppose this plan were pursued in all the large cities, the consumption of honey would increase immensely and the price would soar accordingly. Some would say that our

idea is to form a trust, but such is not the case.

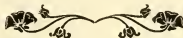
Simply a corporation for mutual benefit is just and legitimate, and farther than this the producers of honey need not go.

We hope you will succeed in awaking your brother bee keepers from their dreams. They are sleeping on their rights.

We are not a strong believer in the idea of "shaking" energy into our bees, but we do believe that bee keepers are in need of a good jolting.

Let us assume that the honey producers of the country were organized for the marketing of their product. The middle men who handle honey would no doubt be largely eliminated, but the public would pay no more for their honey than formerly. We are informed that the National Biscuit Co. purchases two or three millions pounds of honey annually, (at its own price) which is made into cakes and sold at from 15 to 50 cents per pound, showing that a great profit is made on the honey. Why not some of this profit go into the pockets of the bee keepers instead of the coffers of a great organization? Organized, the producers would be in a position to demand fair treatment and fair prices.

St. Louis, Mo., Sep. 8, 1910.



The Ventilation of Bee Cellars and the Value of Lime.

W. H. MESSENGER.

I have long been amazed at some of the discussions relative to the wintering of bees in cellars; at the causes of failure, and the remedies proposed by people who, I am sure, know more of science than I do, but who seem to have forgotten it.

We read of people who, when their bees are uneasy in the spring, put an electric fan at the door and try to blow the fresh air in—but do they? They stir up the air into a commotion, and a little

escapes; so a little fresh air goes in to fill the vacuum; and that is all.

The whole system of ventilation is this: Pull the air out, create a vacuum, and Nature will do the rest; as she abhors a vacuum. Instead of the fan being used to blow fresh air *into* a chamber full of air, it should be so placed that it *sucks the air out of it*. No fear of there being a pint less air in the cellar however long the fan is run; for fresh air will come in as fast as the other goes out.

I think ventilation has as much to do with the successful wintering of bees, as has the food, but I mean *real* ventilation i. e., supplying more oxygen. When you air-slack lime in a bee cellar you *ventilate*. It is a chemical process. The lime converts the moisture (water) into several parts HO₂ (hydrogen 1, oxygen²) and there is much free oxygen liberated in the air, making it better for humans and bees.

When Fred A. Krause said that the ventilator did not "chase out" the damp, foul air, he was nearer a solution than he knew. The barrel of lime you placed in the cellar in Northern Michigan did more good than the bags of sawdust, at the door. I doubt if the latter did any good.

Make a cellar perfectly air-tight if you can, then put a single small pipe through the roof for the ventilator, and there is *no movement of air*. Of course, there is a *little* movement, because if you cannot make the cellar air tight; but the snigger it is, the less movement there is: so the air lies dead and still, robbed of its oxygen by the bees and loaded with carbonic acid gas. All this can be easily and cheaply altered if given a little thought.

We will take the Krause cellar for an illustration: He should have built a frost proof cellar alongside of the cellar door. Made it about large enough to shelter a stove and the fuel, and allowed himself to get into it. Over the stove place an air tight drum (stove should have a side-feed door); make three holes in it of the same size to take a 6- to 12-inch pipe; one at the side near the top leading to the cellar; one on the opposite side near the bottom leading out doors, and one on top, which should have a tight fitting lid. The pipe leading out should have a damper to use if the air passes through so quickly that it does not get warm enough to suit. Run another pipe of the same size out of the cellar, and connect this up to the bottom of the stove, at the draft-opening, doing a fairly good job at the connection, for, as a fire must have air to stay alight, it will have to suck the cold, wet air from

the cellar bottom, giving room for the fresh, warm air to come in, which it will do without any perceptible air currents in the cellar, two feet away from the pipes. That is all there is to it. I think the air would be so pure that when a warm spell came in the spring, too early to take out the bees, they would stay quiet; but, if it continued warm some time, so that it seemed as if they wanted a change of air, the operation could be reversed; the pipe leading out doors from the drum could be taken out and placed in the hole on top, and continued through the roof; putting the lid in the side-hole; the lower pipe disconnected at the bottom of the stove and extended to the outside air. The fire would warm the air in the drum, causing it to ascend, thus sucking air from the cellar, when the outside air would flow in through the lower pipe.

There is a saying that I never could agree to: "That is all right in theory but won't work in practice." I always maintain that that kind of theory is *false*. The above plan I know to be no false theory, for I have proved it by something more positive than mere bees, viz., *myself*.

I was greatly pleased to read in the December Review, about your visit to T. B. Terry, to examine into his system of heating and ventilation, and that you adopted it. I do not know the system, but, as it includes ventilation, I will give it as my opinion that you will get more profit out of the money spent in making that visit and installing the system, than anything else in the house, not even excepting the open fire place, although that is a good investment, too, as the outward visible sign of it is the smallest part of its usefulness, for it is a good ventilator as far as it goes. I am troubled the same as A. I. Root, in being very sensitive as to the quality of the air I breathe. On that account I hate to go to church, lectures, etc., and, I do not make long visits in winter to people who have steam or hot water heating installed; the better built their house is, the worse it is for me. Seventeen years ago I built my house in New York, and many an hour

did I spend evolving a scheme to have the air in my house as good in winter as in summer and I succeeded beyond my expectations, for it is at its best when the weather is coldest; yet I heat a nine-room house and bath to over 70° day and night (at night it may at times go 10 degrees lower,) six months in the year, on less than five tons of coal. I am a smoker, and all of my acquaintances are smokers, and you can always smell stale tobacco smoke in the summer, even when all the windows are open, but never in the winter twenty minutes after the smoking has ceased; a positive proof of the entire change of air. And mind you, Mr. Editor, the cellar plan as outlined is an improvement on that of my house. At home the ventilating pipes are connected with a pipe placed inside the flue, so there is only the smoke going up the chimney to warm the air in the pipe to create the suction. If building again, those vents would all connect with the bottom of the furnace. The main thing with the hot air furnace is to draw in the air of the rooms, so as to give the warm air room to get in. Another thing, of course, is necessary; a cross-section of the cold air box should contain as many square inches as is contained in all the warm air pipes attached to the furnace.

This is the principle that I have advocated in the cellar. The cellar could be a snug-built affair above ground, but the nearer frost proof it is, the less attention it would require. I have known my furnace to stay alight for three days without touching it, yet it would keep the house feeling comfortable, when, otherwise it would have been damp and chilly.

PORTLAND, Me., Feb. 3, 1910.

[I was much interested in the foregoing, which came to me as a private letter, but is too good to be lost. Particularly was I interested in the idea that the slacking of lime in a cellar is a species of ventilation. All winter long I have kept a liberal supply of unslacked lime in my cellar here at Flint. A barrel of lime just about fills eight wooden pails, and these I set about in different parts of the cellar. When the lime becomes fairly well slacked, I dump it in the hatchway, and fill the pails with a fresh supply. I have several times wondered, and I mentioned it once in the Review, at the pure, sweet odor of the cellar. A cellar containing bees usually has a "beey" smell, and, if they are not wintering well, something more, but no one could tell, from the odor, that there was a bee in my cellar here in Flint.—EDITOR.]



A Staple Market and Uniform Prices Better than Fancy Prices on Small Sales.

HARRY LATHROP.



Friend Hutchinson: You have asked me to criticise your editorial on the subject of selling the honey crop, and give my views and experience. I can not criticise what you have

said, because it is sound and I agree with

it. The great trouble with this discussion is that we can't touch the sore spot; the bee keepers (?) who cause the trouble, do not read bee journals, and it is hard to reach them. To me it seems desirable to have uniform prices for extracted honey of good quality, that honey should become a staple article in the retail markets of the country the same as other products of the farm. The consumer should not pay a large profit to the retailer; as honey comes into competition with sugars and syrups

that are of a uniform price all over the country, and are handled for a small margin of profit by store keepers. Honey as now handled ranges all the way in price from less than cost of production, to more than consumers ought to pay, in view of the price of other sweets. Sugar is sold at a small margin of profit; the price is nearly uniform in all localities, and it needs no advertising.

That is the way it should be with honey, and people should buy honey as regularly as they buy other groceries. Some men go to the producer and buy his honey at a low price, much lower than he should receive, and then peddle it out to families at a profit of 100 to 200 per cent. This will never create the kind of market we want. People who buy a little honey of a peddler, paying about twice as much as they should pay, will consider it an expensive luxury and will use it as a medicine. How much better it would be to make the price to consumers such that they could afford to use it right along, the same as they do other things, such as butter, bacon, eggs, sugar and syrups.

There has been no agreement or arrangement among producers and dealers in regard to this matter, and each individual has gone ahead without much thought of trying to work in harmony with others in the same field. True, in some neighborhoods, there has been an agreement among the local honey producers, whereby they were to maintain certain prices, but what we want is an agreement that will take in the *whole country*. I hesitate to state what I consider should be a fair wholesale price to producers of extracted honey, and what consumers should pay at retail. There may be a difference of opinion on this point, but I am certain that an agreement should be reached. I believe it is to our interest to make the price to consumers as low as possible, in order to create a ready and reliable demand for all the honey we may produce. Regular dealers should be found who would be willing to handle the crop, put up in

suitable packages, at a margin of about one cent per pound. I would rather make a regular customer of a house-keeper by furnishing him honey in one to five gallon lots at ten cents per pound, than to succeed in selling him a small bottle that would net me at the rate of 20 cents per pound, as some have boasted they have done. I do not consider it is any credit to a man to make such sales of an article of food. He might better sell pills, or some other medicine, since his success in making such sales depends on his smartness or hypnotic powers. Honey comes into competition with sugars, with maple syrup and molasses of different sorts, as well as with a cheap grade of syrup, made from glucose and flavored with a little cane syrup. We ought to be able to figure out just about what honey is actually worth, in comparison with these other sweets and the price should be made accordingly. We can not *force* the demand or price to any point we wish, because the people will use these substitutes rather than pay more for honey than it is worth. It is all right for fancy comb honey to bring a fancy price, and for that which is broken, mussy, and more or less mixed with bee bread, to sell for anything it will bring. It is not a uniform product.

The production of a real fancy article requires skill. It is preferred to extracted honey many times, on account of its appearance, and for special occasions. Extracted honey, if thoroughly ripe before it is extracted, contains all the food elements of honey, and is destined to be the form in which honey will be used as a staple article of diet. Comb honey prices will take care of themselves, if we can place extracted honey on a firm and paying basis.

TAKE A BROAD VIEW OF THE MATTER.

In the above I have taken a broad view of the question. That which is the best for all is, or ultimately will be, the best for each. In the absence of a regular market for honey, each individual pro-

ducer is forced to adopt some plan of his own that has little or no reference to what other producers are doing. I have built up a local and shipping trade on the 10-pound pail. As I want 10 cents for the honey, I put $9\frac{1}{4}$ pounds in the pail at 92 cents. Pail costs 8 cents. That makes a dollar package. It is handy and neat. I will stick to it till I find a better way. I sell quite a lot to the train men who pass through here, and who have found out that honey that I sell them is an economical and healthful article of food. It is easy to sell honey to an educated customer. Often, as an engine passes the station, the engineer holds up one finger. That means one pail of honey to be ready as he passes on his return trip. When the pail is delivered his dollar is ready; there is no book keeping.

In working up my trade I have found the following circular very useful. I give them out, send them by mail, or inclose with packages of other goods. My problem now is to produce enough stock to supply the demand which has already been created.

Announcement

TO MY FRIENDS AND PATRONS:

For many years I have been engaged in bee keeping in the hill country of Southern Wisconsin. Experience and observation convince me that this district produces honey of superior quality.

Our pastures are clean and free from undesirable plants and weeds, white clover being the predominating honey source, with basswood as a close second. We also secure amber honey of excellent quality from autumn flowers. I make a specialty of furnishing a fine article of extracted honey for table use. Customers once secured buy of me year after year. The honey is guaranteed to be absolutely pure, and has "the flavor that calls for more."

A Word About Honey as Food

There is more food value in a pound of well-ripened extracted honey than there is in a pound of beef steak. It is a delicious health-giving food. Eaten with sweet milk and good bread, it may well take the place of meat to a great extent. It is economical, as well as pleasing, and should be in daily use.

Apiaries situated at the following places:

Monroe, Wisconsin.

Bridgeport, Wisconsin.

Sincerely yours,

Bridgeport, Wis. HARRY LATHROP
To restore this honey when granulated to a liquid state, set the can containing the honey into a vessel of water and heat slowly until the honey is thoroughly melted. Do not boil the water. The even granulation of honey is the best evidence of its purity.

BRIDGEPORT, Wis. May 13, 1910.



EDITORIAL

Be Good to yourself. You are very important to you.

Give to the world the best you have, and the best will come back to you.

Our Clover Honey is all sold; but we can still supply the Willow Herb and the Buckwheat and Willow Herb mixed.

Dummies may be needed in hives with close-fitting, or self-spaced frames, but they should have no place when the frames are of the loose, hanging variety

Marketing, is, in my opinion, still the most important subject for consideration; and I may say that I have not yet published one-half of the articles that I have received on the subject; and they are still "coming."

The Review has been sadly lacking in editorial matter during the last few months; of this no one is more thoroughly aware than is myself; but, I am happy to say that I am rapidly regaining my health, and will soon be back in the harness with renewed vigor, and an added knowledge of how to care for my health.

Canadian Subscribers will please send \$1.10 when renewing their subscription.

When Writing the Review, please mention any little fact, or point, that may be helpful to your brother bee keepers. Articles, long or short, are always welcome. All will be read, and such as are used will be paid for. You have no idea how a journal will improve, once you begin contributing to its columns.

The Townsend Bee Book of 87 pages, is now out, and contains some of the best things Townsend has ever written. Here is a list of the contents: How I Became a Successful Manager of Bees on a Large Scale; What Hive to Adopt; How to buy Bees; Folding Sections and Putting in Foundation; What to do just Preceding the Honey Flow; Strong vs. Medium Colonies at the Opening of the Harvest; How to take Care of Swarms; Management Previous to the Honey-Flow to Prevent Swarms; The Honey-Flow; Spring Management; and Making up Winter Losses. Price of the book 50 cts., or I can club it with the Review at \$1.25 for both.

To be Remembered is pleasant, especially when sick and among strangers. When in the hospital I saw in the report of the Albany meeting that Bro. Doolittle and myself were remembered with resolution of sympathy. When the Michigan association was in convention at Grand Rapids, I was called to the telephone one evening to listen to a message saying that I was missed, and there were wishes for my speedy recovery. As I crept back into my cot, in the darkness, there was just a suspicion of moisture on my eye lids. Dear brothers, your remembrance of me will never be forgotten.

Information Wanted.

I wish to make the Review for 1911 attain a point of excellence that it has

never before reached in the way of imparting useful information; and, to this end, I earnestly solicit contributions from practical men who have reached success, and can point out to others the path they have traveled. If you have some excellent plan or method not generally known, send it to the Review. All such as are used will be paid for.

If these contributions can be accompanied by good, sharp, clear photographs, illustrating the text, they will be doubly welcome, and additional pay will be sent for the photos.

Using Section Packing Boxes for Shipping Cases.

Gleanings tells of a subscriber who uses for comb honey shipping cases, the cases in which sections are shipped. Of course, they cost nothing; and if three or four are put together in a crate, they might carry their contents safely. I should consider a single case as too small in size to be used alone. It is too much like an ordinary shipping case, that can be tossed and tumbled about. Put enough of them together in a crate so that two men are required to handle the package, put handles on the sides, and all be well—or as nearly so as it can be.

The Pearce Method of Bee Keeping.

This is a pamphlet of some 28 pages recently gotten out by Mr. J. A. Pearce of Grand Rapids, Michigan. The price is 50 cts., and the book can be supplied by the author. It gives instructions to farmers and others for keeping bees in attics, or the upper stories of buildings. In commercial bee keeping the central idea of the plan recommended is to secure a strong colony by the use of two stories for a brood nest. At the opening of the honey harvest, the colony is divided, the queen being placed upon a new stand, and the supers on the hive on the old stand; where queen cells will be built. On the eighth day all cells except one are cut out, thus there is no swarming.

Don't Give up Your Bee Journals.

At the end of the year some subscribers will drop their bee journals. There are two reasons why I hate to see this done. One is the loss of the subscribers, and the other the subscribers' loss; and the latter is ten fold greater than the former. No man can know too much about his business. Success comes from knowing how; from doing things the right way. It is not the things we do without that help us to succeed, it's the things we *have*, to work with; and, to the bee keeper, no tool is more important than his bee journal.

Take Good Care of Yourself—Don't Overwork.

When at the hospital I was struck with the large percentage of *middle aged* men among the patients. In talking with them I learned that the majority of them brought on their troubles by indiscretion, mostly of diet and labor. Many of them had done two day's work in one, year after year. They had bolted their meals—eaten them on the run. They were well and strong and thought they could stand *anything*. Nature is patient and long suffering, but, in the end, she exacts the penalty. If you have health, care for it and prize it as the most precious boon on earth.

Colds Don't Come from a Draft.

I was brought up with the idea that I must not sit in a draft, or I would surely catch a cold. My faith in this belief has been somewhat shattered. When at the hospital the windows on both sides of the ward were left wide open day and night, rain or shine. Night after night have I slept with the wind blowing in upon me full force, yet I never took cold. It was amusing to listen to the protests of a new patient against the open windows. He, and all of the rest of them, would catch their death of colds—he was *sure* of that. But the windows stayed up in spite of all protests, and the joke of it was, nobody had a cold while I was there. When we

go out of doors the wind blows upon us and we think it is all right; why should it be any different because it blows upon us through an open window?

Exercising Caution in Hauling Bees and Honey.

About a year ago, when driving down a steep hill in Ohio, in company with a well known bee keeper, he told me that he once lost a load of honey from so simple a thing as the breaking of a hame strap. He was driving up the hill with a load of honey, when the strap broke; the wagon began to run backwards; there was no way to control it; and it backed off the side of the road and turned completely over; smashing the honey into one conglomerate mass on the ground.

Have Bees Intelligence?

It has been argued that bees are lacking in intelligence—that they are simply reflex machines, but, once in awhile something points strongly towards reason. Some of the readers of the Review will remember a Mr. Menhall who has bees on the roof of his floating photographic studio used on the Mississippi; well, he writes me that he placed a gasoline engine on his boat last summer and uses it as a propelling power. He now finds it unnecessary to fasten the bees in their hives when moving from one landing to another. He simply starts the engine one-half or three-fourths of an hour before starting, and every bee that comes in will stay in the hive until the engine is stopped. It would seem that the bees had *learned* not to leave the engine was running.

A New Edition of the A B C and X Y Z of Bee Culture.

New editions of this book come out so frequently that it is difficult to say anything new in the way of a review. The last edition has one new feature, that of showing operations in the apiary by means of what the publisher calls "moving pictures," that is, a series of pictures

showing how the work is performed from beginning to end.

The book is not simply the work of one man, as specialists are secured to write upon the subjects with which they are thoroughly acquainted. For instance, the anatomy of the honey bee has been furnished by Prof. Snodgrass, of Washington, D. C., who is probably the highest authority on the subject in this country.

The title of this work, that is, the "A B C" part, seem to indicate that it is intended especially for beginners. Not so. This simply has reference to the arrangement of the subjects, which are taken up alphabetically. Neither let any one think that it is a dictionary or encyclopedia. It is the most comprehensive work there is printed on apiculture; in fact, I doubt if there is any of the minor rural pursuits upon which there is published so complete or exhaustive a treatise. No bee keeper worthy of the name should be without this book—can afford to be without it.

There are 567 pages, and I don't know how many engravings—probably more than 1,000. It is substantially bound in cloth, and the price is only \$1.50; or I will club it with the Review for only \$2.25 for the book and the Review one year.

Criticisms and Suggestions Wanted.

When you are renewing your subscription to the Review, I wish you would write me a letter, telling me which feature, and which writer for the Review, are the most helpful to you, and why. Mention the feature for which you care the least. Say what change you would like; what new features added. What subjects you would like discussed.

I may be making such a journal as suits *myself*, but the question is does it please my readers? I can't tell unless the readers inform me. Now please write me freely, and confidentially, your opinion of the Review and its features, and how you think it might be improved. What you write won't be published; cer-

tainly not without first securing your consent.

I wish every subscriber to write me a letter about the Review, and to the one who writes the best letter, the most helpful, let it be of praise, blame, or suggestion, I will, next spring, send a full colony of pure Italian bees, (Moore strain) in a ten-frame, Langstroth hive, prepay the express charges and guarantee safe arrival. To the five subscribers who send me the next best letters, I will send to each a tested Italian queen, Moore strain. Now let's hear from you all, as to how to make the Review brighter and better.

Some Needed Changes in the National.

Of all the good things written by Bro. York, of the American Bee Journal, I think his address at the Albany convention is the best. I would be glad to copy it entire, but the index always crowds the December issue. Here are some of the points that he makes:

The National was formed to defend its members from persecution. It has done excellent work in this line, but is no longer needed for this purpose. So many suits have been gained, so many precedents established, the right to keep bees so thoroughly proven, that no one attempts to prosecute, once he learns what has been done. So far as I know, the National has not been for years, a defendant in a suit.

Another object of the National was to assist in enforcing the laws against the adulteration of honey, but the Department of Agriculture has stepped in, and is enforcing the laws so thoroughly that the National Association finds its occupation gone in this direction.

The only work that remains is that of "promoting the interests of bee keepers;" and Bro. York decides, very correctly, I think, that the most fruitful field is in advertising and extending the sale of honey. In short, he would turn the Association into a business organization. To expedite business, he would reduce the number of directors. He would have

the State associations branches of the National; each State association sending one or two delegates to the National convention, the expense being paid from the general fund. These National meetings to be a law making body for the whole.

Very properly, Bro. York says: "We must get away from the *minor* things of bee keeping at our great, annual, National conventions. The matters of the best way to produce honey, the best way to introduce queens, and the best way to do a lot of things in bee keeping, can best be left to the columns of the bee papers. These National gatherings should be devoted to the larger things of honey production. They should be business meetings throughout, and have mainly to do with the marketing and distributing of the honey crop."

Again he says: "The time has come, I believe, when the National Association can well afford to employ a man to look after this work for them. One live man—I say a *live man*—devoting his whole time to organizing the bee keepers of this country, could make the National association go forward by leaps and bounds."

To accomplish all this, the dues must be placed and held at \$1.00—no accepting of State association members at half price.

Bro. York says that it has been intimated to him that, unless the National takes these advanced steps, another organization is likely to be formed to take up this work. Continuing, he says: "The National should *lead*, as it always has led; but in order to continue doing this, it must adapt itself to the demands of progress and advancement"

These changes were emphatically approved at the Albany meeting.

Read the Companion 40 Years.

I wonder if my readers could guess what paper I have read the longest, that I read the most thoroughly and enjoy the most—it is the *Youths' Companion*. I have been figuring it over, and I find

that I have read it continuously for 40 years. I remember once, saying to my mother: "If I were going to edit a paper I would want it to be like the *Youths' Companion*." A faint smile flitted across her face as she said: "Well you might." Many judge, from its name, that it is a *child's* paper, but it isn't. The matter that it contains is of interest to a person of any age who is old enough to understand it. I doubt if it is possible to secure elsewhere, for the same amount of money, so large an amount of fresh, entertaining and instructive reading matter. The value of the *Companion* in a family of growing children is beyond comparison. It cheers, interests and instructs; it becomes a liberal education to the one who reads it; above all, it encourages the setting up of high standards.

Although the *Companion* has recently been enlarged by the addition of an amount of reading matter in the year equal to 400 ordinary magazine pages, the price remains the same, \$1.75 per year. New subscribers receive the rest of this year free, also an Art Calendar for 1911, lithographed in 13 colors and gold. Sample copies sent free by the *Youths' Companion*, Boston, Mass.

If more convenient, when renewing for the Review, new subscriptions for the *Companion* may be sent to this office—in fact, it will be a favor to have you do so.

Don't Condemn Doctors and Drugs.

My article in the Review on hospital treatment has brought me a number of letters. One suggests that I ought to read Terry's book and his writings, and the intimation is that I would not need hospital treatment. I am an admirer, and believer, to a great extent, of Mr. Terry's. I have read all that he has written for the last 25 years. I have visited him in his home and seen how he lives. He is doing a lot of good; but I don't agree with him in his wholesale and unqualified condemnation of doctors and medicines. He even goes so far as

to sneer at surgical operations for appendicitis or cancer.

Now, I have always lived a temperate life. Indulged in no late hours, dissipation nor excesses. Been careful of my diet and not over worked. Just why my stomach should fail to furnish the needed acid to digest my food, I don't know; but I do know that this acid can be supplied artificially, and will answer the purpose of the natural secretion. Why not use it?

By the way, one correspondent suggests that I ought to explain that the 40 drops of hydrochloric acid used were hydrochloric acid *dilute*—a ten per cent. solution. This is true, but it is so well understood by physicians and druggists that I did not think it necessary to mention it. I might add that tartaric acid can be similarly used.

Even Monopoly Cannot Force Sales at High Prices.

In a late daily paper I saw the statement that the production of crude petroleum was increasing far ahead of the consumption of the refined product, kerosene; and the Standard Oil company had discovered that, while it is always possible for a monopoly to maintain high prices, it is never possible to compel people to patronize it. It is said to be the intention of the trust to inaugurate a campaign for the purpose of increasing the consumption of oil; and this campaign is to consist, in part, of a general reduction in prices.

There has been much talk of the fine things that might be done if bee keepers were only sufficiently organized to enable them to control the price of honey; and there is no question but what much honey is sold at too low a price, but it is equally true that a monopoly might defeat its own ends by putting prices too high. It seems that even the Standard Oil company, the greatest monopoly on earth, is powerless to sell goods when the prices are exorbitant. The Review is striving to help bee keepers in the

successful and profitable marketing of their honey, but it doubts if that good is to be gained by raising the retail price to the consumer to any great extent.

Overstocking Sometimes Imaginary.

The drouth last May and June dried up the wild raspberries to such an extent that no surplus was secured from this source. We then saw that our only hope was in the willow herb, which made a splendid growth near two of our apiaries after the drouth was broken. There was one apiary of 100 colonies near which were only small scattering patches of the willow herb, and we planned to move this apiary to some locality where it was more abundant. The weather in July became intensely hot; the sandy roads dried out until even an empty wagon was a load; I was sick and unable to help; and, very reluctantly, the moving of the apiary was abandoned.

The surprise of our life time is that the bees in this yard stored almost as much per colony as those in any of our apiaries where the pasturage was so much more abundant.

I am becoming convinced that when some of our well-known sources of honey yield honey abundantly, it is practically impossible to overstock a locality well supplied with the honey yielding plants. I think the nectaries, at times, pour out nectar as a spring pours out water. Suppose that they are emptied one hour, they may be full again the next.

We are planning to reduce the number of our apiaries. We shall drop one, at least; possibly two, and increase the number of colonies in the others; running the number up to perhaps 200 colonies in one yard. With that number of colonies in a place, we can afford to keep some one there all of the time during the swarming season, if necessary.

A New Edition of Advanced Bee Culture.

During the last four or five years I have been having quite a bit of experience

in establishing out-apiaries, and in the production of honey upon a somewhat extensive scale. I have also visited a number of prominent bee keepers and photographed and described the methods whereby they made money.

Of course, all of this has appeared in the Review and in Gleanings, but in a more or less scattered fashion, and, for a year or more, I have had in mind the gathering together of this matter, in consecutive order, in a new edition of *Advancing Bee Culture*. There are several reasons why I have not been able to accomplish this; chief of which has been the lack of health and strength to do the work.

During my convalescence at the hospital, a correspondence over the matter sprang up between E. R. Root and myself, with the result that under my guidance and sanction, he is revising and adding the new matter, and the A. I. Root Co. is publishing the book. All of

the new matter will be something I have written, but the work of fitting it in with the old, so as to make a smooth, continuous story will be that of my friend Root.

While there may be a pardonable pride in doing *all* the work myself—writing, printing and publishing—there is another side to the question. The advertising and selling facilities of the A. I. Root Co. will sell ten times as many copies of the book as I would be able to sell, thus adding greatly to its usefulness.

While the new edition will contain considerably more matter than the old, the publishing facilities of the A. I. Root Co. will allow of its being sold at an even \$1.00, postage paid. Orders may be sent to this office; in fact, I will club it with the Review at \$1.90 for the book and the Review one year. Orders may be sent in at any time, and will be filled as soon as the book is out—about the holidays.

Selected Articles.

AND EDITORIAL COMMENTS.

SWARM-CONTROL.

An Attempt to Accomplish it by Alternately Throwing the Flying Bees From one Hive to Another.

This is not a timely topic, but *Gleanings* has an article, by J. E. Hand, on this subject, describing a plan that will probably be regarded as a novelty by many readers, hence I copy it, that I may comment upon it, and call attention to what has been done in that line in the past: Here is what Mr. Hand says:

For generations the outside world has looked upon bee keeping as a hazardous pursuit, and these outsiders can hardly be blamed for entertaining such erroneous

ideas when up-to-date bee keepers acknowledge their inability to control the swarming impulse of bees with anything like economy of labor. When bee keepers learn how to control their bees by economical labor saving methods the pursuit of honey production will stand upon a solid basis as compared with other business ventures.

As many of the readers of this journal already know, the writer has for several years been engaged in an earnest endeavor to solve the problem with economy of labor. Our efforts have not been in vain; for after much experimenting along many lines we have at last discovered principles by which bees may be controlled with the same precision and certainty that the expert engineer controls his engine, and with an economy of labor that renders the new system well nigh automatic in operation. Results that formerly necessitated an al-

most endless routine of shaking and brushing bees, interchanging hives and brood chambers, clipping queens, etc., are now obtained in the highest state of perfection in a much easier manner.

The simple equipment is incorporated in a bottom board, which is adapted for use with any hive having a loose floor. This bottom board is double, and wide enough to accommodate two hives side by side, separated by a one-inch strip. A rim around the outside forms a one-inch space under the frames. On each side, centrally located, is a main outside entrance, $\frac{1}{2} \times 12$ inches, each leading through a short covered passageway to two inner entrances, each having a capacity equal to the outside entrance. These inner entrances are opened and closed by switch levers, the inner ends of which are pivoted to the bottom board, and work in a socket at each end of a central "frog," the outside protruding from the main outside entrances.

When a switch-lever is thrown either way from a central position the inner entrance to the hive on that side is closed while the one to the hive on the other side is opened without changing the position or appearance of the outside entrance, as this is always open full width.

On each end, centrally located, is an auxiliary entrance $\frac{1}{2} \times 6$ inches, provided with a cut-off, to be opened and closed as occasion requires.

The equipment is the same on both sides, and is always in position ready for instant use. It does not in the least interfere with the free passage of the bees, nor conflict with any manipulation by the apiarist. To render the equipment doubly effective there is a system that goes with it which will be described in another article.

Perhaps a bit of history relative to one colony may be of interest. This colony was placed upon the switch-board June 18, having previously developed the swarming fever to the highest pitch. On the day mentioned, it cast a swarm which, having a clipped queen, returned, and with it a part of two other swarms that were out at the time, the hive being completely covered with bees. In this condition it was placed upon a switch-board. The next day the field bees were shifted over into an empty hive by the new system. Ten days later the swarm thus made was reinforced by another shift. At the close of the harvest, July 12, the field bees were shifted back into the original hive, and worked for cell building the rest of the season.

July 30, the five supers on this hive, as well as the one on the hive by its side, were chock full of beautifully white-capped honey built from foundation, making 100 per cent. increase and 150 lbs. of honey, all within 25 days, which is not so bad when we consider that the yard contained 200 colonies, spring count, with a far from good location. The time spent in manipulation did not exceed ten minutes aside from putting on supers.

This colony is a fair sample of all the others that were worked by the new system which shows what may be done with bees by applying correct principles in harmony with their instinct, which is the magic key that will unlock the doors of every avenue that leads to the perfect control of bees with economy of labor.

It is not often that editor Root is caught napping, but judging from his comments upon this plan, he has forgotten the H. P. Langdon device for swarm prevention which was patented and introduced a dozen or 15 years ago with a great flourish of trumpets. In principle, it was an exact counterpart of the Hand device. Two hives were set side by side, and their entrances connected by a wooden tube. To enter their hives, the bees were compelled to pass through this tube, and a slide in the tube allowed the bee keeper to throw the working force of both hives into either hive. The "shifting" act that friend Hand performs in the bottom board, was accomplished by Mr. Langdon by a connecting tube in front of the hives. That is all the difference. The principle and system of manipulation were exactly the same as described by Bro. Hand.

The Langdon device was illustrated and described in *Insect Life*, a paper published I believe, at Washington, D. C., and this description was copied into the Review. I can't give the volume, and number, as I am writing this while away from home.

It seems that Mr. Langdon made quite a success of it, on a large scale, the first year that he tried it, but when it was sent out broadcast, the next year, it proved a complete failure in the hands of bee keepers in general.

This was at the time when the Hon. R. L. Taylor, of Lapeer, Mich., was conducting some apicultural experiments for the State and several of the devices (I think three of them) were sent to him for trial. Mr. Taylor gave in the Review a full account of the experiment. The six colonies placed on trial swarmed out repeatedly. If I remember correctly there were 15 swarms issued. I was present when one swarm issued. The colony that is depleted will destroy its queen cells (also lose quite a lot of its unsealed brood) and the colony that gets the extra bees will swarm *without waiting to build queen cells*.

Of course, no one doubts that friend Hand has succeeded exactly as he says he has, and I sincerely hope that there is some hidden kink in his management that will enable him to continue his success, but, I must confess that I am far from hopeful.

FILLING HONEY CANS.

How it may be Done with a Self-Measuring Faucet,

Where the honey is stored in large tanks, and drawn off later into 60-pound cans, I know of no better plan for filling the cans than the one described by John G. Corey in Gleanings. Here is the plan:

Thirty-five years ago, when I became a producer of extracted honey by the carload, I found that the largest syringe to be procured in the market would not allow a ton of the heavy honey we were producing in Ventura Co. to pass through it in less than three hours. This slow process not being satisfactory I availed myself of my knowledge of labor and time saving appliances by procuring a measuring faucet made by the Enterprise Mfg. Co. With this device I could draw off and case up a ton of heavy honey inside of an hour. The faster the crank is turned, the shorter time is required to fill the can. The dial is adjustable; and if the can, as it comes from the factory, should hold a pint or a quart over or under the 60 lbs. desired, the dial can be moved to zero for each can, and five-gallon cans can be filled

rapidly, and so as not to vary four ounces for the whole crop.

Bee Keeping not a Rosy Success in the Tropics.

I have always greatly enjoyed everything that came from the keen and versatile pen of Mr. H. E. Hill, ex-editor of the American Bee Keeper, hence you can imagine with what interest I perused the following:

FT. PIERCE, Fla., Sept. 24, 1910
Mr. W. Z. Hutchinson,
Flint, Mich.

My dear W. Z.—

The Review for September is at hand. I have been more than usually interested in the plans of Mr. W. C. Morris, as set forth on page 278 of that issue. How vividly it recalls the plans of my boyhood days, when, like Mr. Morris, I was overflowing with ambition.

When I had had four years of personal experience, though, my faith in the possibilities were, perhaps, not less than those of Mr. Morris. I was somewhat uncertain of my personal ability to grapple with big problems which I anticipated. I therefore spent a year with one of the old and successful producers, and my confidence in myself increased. So, armed with a certificate of ability, I undertook the task. One more season, in Pennsylvania, which was more than ordinarily successful, tended to still further increase my confidence and enthusiasm.

Then, as you know, I tackled the tropics—the south coast of Cuba. Prospects were bright and I was determined. The result was *failure*. E. M. Storer, H. G. Burnett and a score of others from the North who have tested out the great possibilities of Jamaica and who have no supplies to sell, can give Mr. Morris some valuable pointers as to the difficulties of bee keeping in the tropics. While I sincerely trust that it may be otherwise, I fear Mr. Morris will be the one who will ultimately have to “crawl into a hole.”

Your appended comments are most wise. It would be nothing short of criminal for one of experience to do anything to encourage heavy expense in such an enterprise, for, as sure as day follows night, disappointment awaits the promoters of this enterprise, and, as you suggest, why should one seek a country where the business is fraught with difficulties ten-fold, when he has demon-

strated his capabilities of success in a country with which he is familiar. Perhaps Mr. Morris has never had twenty-seven colonies killed outright in one week by ants, in an apiary of sixty.

In view of my own apiarian experiences I had hoped that none other, as I have been, might be afflicted with the idea of wealth through bee keeping in the tropics. If there was a vestige of hope, though, I would like to go and help him; but I could not muster an atom of hope. Yet, if he undertakes it, I trust he may succeed.

With sincere regards and good wishes, I am, as always,

Very respectfully yours,

H. E. HILL.

POVERTY.

It is a Mental as well as a Physical Condition.

Most poor people think their poverty unavoidable; but the editor of the Success Magazine contends, and I am inclined to agree with him, that many people remain poor because they *believe* that it is impossible to better their condition. I certainly believe that no one ever succeeds unless he first *believes* he will succeed. I wish every one of my subscribers could read an article on this subject in the Success Magazine for November. If you are not a subscriber, nor where you can visit a news stand, send 15 cents to the Success Magazine, New York City, and ask for a copy of the November issue. When it comes read "Success and Happiness are for You." Its perusal may be the turning point in your life. Here are a few extracts from the article:

Poverty is a mental disease. If you are suffering from it, if you are a victim of it, you will be surprised to see how quickly your condition will improve when you change your mental attitude, and, instead of holding that miserable, shriveled limited poverty image, turn about and face toward abundance and plenty; toward freedom and happiness.

The man who is bound to win believes he is going to be prosperous; he starts out with the understanding with himself that he is going to be a successful man;

a winner and not a loser. He does not say to himself all the time: "What's the use? The great business combinations are swallowing up the chances. Before long the multitude will have to work for the few. I do not believe that I shall ever do anything more than make just a plain living in a very humble way. I shall never have a home and the things that other people have. I am destined to be poor and be a nobody." A man will never get anywhere with such ideals.

The poor man is not always the one who has little or no property, but the one who is poverty-stricken in his ideas, in his sympathies, in his power of appreciation, in sentiment; poverty-stricken in his opinion of himself, his own destiny and his ability to reach up; the man who commits the crime of self-depreciation.

It is mental penury that makes a man poor.

How few people realize the possibility of mental achievement, the fact that everything is created by the mind first, before it becomes a material reality! If we were better mental builders we should be infinitely better material builders.

A Morgan or a Rockefeller mentally creates conditions which make prosperity flow to him. The great achievers do comparatively little with their hands; they build with their thoughts. They are practical dreamers; their minds reach out into the infinite energy ocean and produce and create what the ideal, the ambition calls for, just as intelligence reproduces the tree plan coiled up within itself.

To be prosperous, we must put ourselves in a prosperous attitude. We must think opulently, we must feel opulent in thought; we must exhale confidence and assurance in our very bearing and manner. Our mental attitude toward the thing we are striving for, with the intelligent effort to realize it, will measure our attainment. *Everything must be created mentally first, and the thing created must follow its mental pattern.*

Parsimonious saving by cheese-paring efforts does not compare in effectiveness with the results of obeying the laws of opulence. We go in the direction of our concentration. If we concentrate upon poverty, if want and lack predominate in our thought, poverty-stricken conditions must result. There is no philosophy or science which will give us prosperity as the harvest of such mental sowings.

Poverty-stricken ideas keep us in touch with poverty-producing conditions. We must conquer inward poverty before we can conquer outward poverty.

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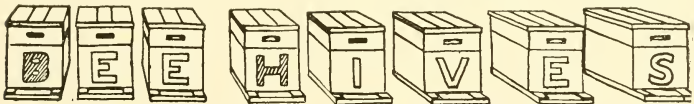
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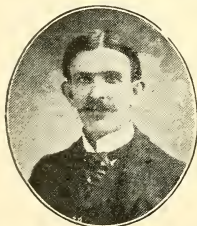
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Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

"Sun Kured" Raisins

"Sun Kured" brand of raisins are the most delicious confection imaginable, being very rich in sugar, and possessing a delightful flavor, distinctly their own. Buy direct from the growers, you are then sure of fresh goods, you also save 75 per cent. on the cost. Price, $7\frac{1}{2}$ cents per lb. Packed in moisture proof boxes containing 25 lbs. \$1.85, 50 lbs., \$3.75; 100 lbs., \$7.25. If they are not the finest raisins you ever tasted in your life, return them and we will promptly refund your money.

G. R. Flory & Co., Lemoore, Calif.

Dept. 4

Three Kinds of Honey

White Clover According to my individual taste, no honey is superior to white clover. It has a mild, yet distinctive and delightful flavor. If you have never tasted pure white clover honey, there is a treat in store for you. Here in my little apiary at Flint I have produced about 3,000 pounds of this kind of honey. It was left on the hives until all sealed over and thoroughly ripened—thick, rich and aromatic. It is put up in new, 60-lb. tin cans, and offered for sale at only 10 cts. per lb.—\$6.00 for a 60-lb. can.

Willow Herb This honey is the whitest of any honey with which I am acquainted. The honey is thick, rich and spicy. We have harvested a fine crop of this honey in our Northern Michigan apiaries. It is put up in new 60-lb. tin cans, and offered at 10 cts. a pound—\$6.00 for a 60-lb. can.

Buckwheat This is not pure buckwheat, but early blossoming buckwheat near one of Northern Michigan apiaries gave to the willow herb honey something of a buckwheat color and flavor—enough so that it can't be sold as pure willow herb honey. It is put up in new, 60-lb. tin cans (two in a case) at 8 cts. a pound—\$9.60 for a case of two cans.

Samples A sample of either of the above honeys will be mailed for 10 cts., and the 10 cts. may apply on any order that may be sent.

W. Z. Hutchinson
Flint, Michigan

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 10 to 11c; beeswax, 30c.

Oct. 6, 1910

BLAKE-LEE CO
4 Chatham Row

NEW YORK CITY—The demand is good for comb honey, principally for No. 1 and fancy white, while the dark grades are rather dragging. Receipts have been quite heavy of late, and are likely to continue so for some time to come. We quote fancy white at 15c, with exceptional lots at 16c; No. 1 14c; No. 2 12 and 13c, dark and mixed 10 to 12c, according to quality. Extracted in good demand at unchanged prices. Beeswax steady at 30c.

Oct. 20, 1910

HILDRETH & SEGELKEN
82 Murray St.

CHICAGO—There is some accumulation of honey which is usual at this time of the year. The prices are not liable to change from those now prevailing. Beeswax is in good demand, all of it that is clean and of fair color brings 32c. Fancy white 17c. No. 1 white 15 to 16c, fancy amber 14 to 15c; No. 1 amber 12 to 13c, fancy dark 11 to 13c, No. 1 dark 9 to 10c, white extracted 8 to 9c, amber 7 to 8c, dark 6 to 7c, beeswax 30 to 32c.

Oct. 19, 1910

R. A. BURNETT & O.
199 S. Water St.

CINCINNATI—While the price on fancy comb honey is very firm, the demand is not as good as it was 60 days ago owing to the fact that the many bee keepers bring in their little lots to the country stores which lessens the demand from the jobber. We are selling strictly fancy comb honey in 24 section cases, \$4.00 by the single case, and to the jobber at \$3.75. Amber and dark comb honey is not wanted at any price. Extracted honey is suffering to some extent in demand as it always does around the holidays. There is no reason for lowering the prices stated, it will not hasten the sales; we therefore quote amber honey in barrels, according to quantity and quality purchased, from 5½c to 7½c; fancy white in 60 lb. cans from 9c to 10c. We are paying for choice beeswax from 28c to 30c per lb. delivered here.

Nov. 21, 1910

THE FRED W. MUTH CO.

DENVER—We quote strictly No. 1 new crop comb honey in a jobbing way at \$3.60 per case of 24 sections, No. 2 at \$3.15. Last season's crop is now all cleaned up. Extracted strictly No. 1 white at 8½c, light amber at 7½c, amber and strained at 6½c per pound. We pay 25c for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASS'N.
F. Rauffuss, Mgr.
July 19, 1910
Denver, Colo.

TOLEDO—The demand for comb honey is light, owing to high prices and risk in shipping during the cold weather; extracted in fairly good demand, for better grades. Beeswax firm at 28 and 30 cents. We quote as follows: Fancy white 15 to 16½c; No. 1 white, 14½ to 15½c; fancy amber, 14 to 15c; white extracted, 8½ to 9c, amber extracted, 7 to 8c.

THE GRIGGS BROS. & NICHOLS CO.,
Feb. 19, 1910.
Toledo, Ohio

KANSAS CITY—The receipts of comb are liberal, demand fair; the receipts of extracted are light, demand good. No. 1 white, \$3.25 to \$3.35 per case of 24 sections; fancy amber, \$3.00 to \$3.25; No. 1 dark, \$2.50 to \$2.75; white extracted, 7½ to 8c per pound; amber 7c; beeswax 25c.

C. C. CLEMONS & CO.
Oct. 20, 1910
Kansas City Mo.

CINCINNATI—The demand for strictly fancy comb honey is very good and we are selling at 16½ to 17c by the single case, and some cheaper in a wholesale way. Fancy white extracted honey in 60 lb. cans, two in a crate, at from 9 to 10c; amber honey from 5½ to 7½c per pound, depending on quality and quantity; good, choice, bright yellow beeswax we are paying 28c to 29c and sometimes 30c per pound delivered here.

THE FRED W. MUTH CO.
Oct. 20, 1910
51 Walnut St. Cincinnati, O.

Carniolan Queens

	One	Six	Twelve
Untested	\$.75	\$ 4.00	\$ 7.20
Tested	1.00	5.50	10.00

Carniolan bees are natives of the cold Alps Mountains. They are very hardy as the severe winters have a tendency to weed out the weak colonies. They have great wing power. Have bred these bees exclusively for fourteen years and have tried queens from nearly all the queen breeders of the different districts in Northern Carniola. Running for extracted honey, they rarely swarm, if given plenty of drawn comb and kept in the shade.

Wm. Kernan, R. F. D. No. 2, Dushore, Pa.

Buy your honey from members of the Michigan Bee Keepers' Association. Send your address for free annual booklet, giving names of members, with information concerning the honey they have have for sale. Address

E. B. TYRRELL, Sec.
230 Woodland Ave., Detroit, Mich.

ROOT'S GOODS

For Western Pennsylvania. Liberal early order discounts. Gleanings and choice queens

GIVEN AWAY

Write at once for circular. Time is limited.

GEO. H. REA, Reynoldsville, Pa.
Successor to Rea Bee and Honey Company

Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How These Moving Pictures Were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds, so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will show a scheme for screening a honey house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M. will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee matter departments and other ordinary illustrated matter, all of which will make *Gleanings* for the coming year the brightest and best it has ever been.

Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet clover seed, *Melilotus Indica*, postpaid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires.**

To encourage old subscribers to secure new ones we will send a one pound package post paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

Yellow Sweet Clover (*Melilotus Indica*). What is it?

This we believe is a very remarkable honey plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and we now have on hand something like a **carload**. The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis* and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

Do Not Delay Ordering

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio

JANUARY, 1911



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 255.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Jan. 1st, 1911

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonpareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Clubbing List

I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1 75
American Bee Journal, (new)....	(1 00).....	1.75
Canadian Bee Journal.....	(1 00).....	1.75
Ohio Farmer.....	(1 00).....	1.75
Farm Journal (Phila).....	(.50).....	1.20
Rural New Yorker.....	(1 00).....	1.85
The Century.....	(4 00).....	4.50
Michigan Farmer.....	(1 00).....	1.65
Prairie Farmer.....	(1 00).....	1.75
American Agriculturist.....	(1 00).....	1.75
Country Gentleman.....	(2 50).....	3.15
Harper's Magazine.....	(4 00).....	4.10
Harper's Weekly.....	(4 00).....	4.20
Youths' Companion.....(new)....	(1 75).....	2.35
Cosmopolitan.....	(1 00).....	1.90
Success.....	(1 00).....	1.75

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

Wanted

Early orders for the Old Reliable Bingham Bee Smokers. Address

T. F. Bingham, Alma, Mich,

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of members.

To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

President.

W. D. WRIGHT, Altamont, N. Y.

Vice-President.

LOUIS SCHOLL, New Braunfels, Texas.

Secretary.

N. E. FRANGE, Platteville, Wis.

Gen. Manager and Treasurer.

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R. A. HOLEKAMP, St. Louis, Mo.

R. A. MORGAN, Vermilion, So. Dak.

J. E. CRANE, Middlebury, Vt.

E. F. ATWATER, Meridian, Idaho

Annual Membership \$1.00.

Send dues to Treasurer.

Names of Bee-Keepers

TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand and arranged alphabetically (in the largest States, and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky..... 182	N. C..... 60
Ark..... 82	Kans... 350	New Mex. 54
Ala.... 80	La..... 38	Oregon... 106
Calif... 378	Mo..... 500	Ohio.... 1306
Colo.... 228	Minn... 334	Penn.... 916
Canada 1200	Mich... 1770	R. I..... 46
Conn... 162	Mass... 275	S. C..... 40
Dak.... 25	Md..... 94	Tenn.... 172
Del.... 18	Maine 270	Tex..... 270
Fla.... 100	Miss... 70	Utah..... 68
Ga..... 90	N. Y.... 1700	Vt..... 205
Ind.... 744	Neb... 345	Va..... 182
Ills.... 1375	N. J.... 130	W. Va.... 178
Iowa... 800	N. H.... 158	Wash.... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich.

Ye who are in need of Honey write to us for prices. Samples 10c.

We have the following fine honey to offer:

Extracted Honey

Orange Blossom
Sweet Clover
Florida Amber

In crates holding two 60-pound cans

Comb Honey

Strictly Fancy Comb Honey
Also Fine Comb Chunk Honey

The Fred W. Muth Co.

51 Walnut St.

"The Busy Bee Men"

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

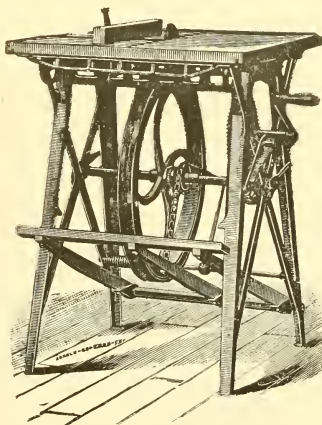
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

354 Ruby Street
Rockford, - Illinois



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in combhoney when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

C. H. W. Weber & Co.

2146 Central Ave., Cincinnati, O.
Dealers in Bee Keepers' Supplies, Comb
and Extracted Honey, etc.

**WISH
ALL
THEIR
PATRONS**

A Happy and Prosperous New Year

"Falcon"

Foundation

None better. Strong, firm
and clear. No acids used.
Trimmed Square Sample free.

Beeswax Wanted

Highest price in cash or
supplies.

Sections

The best bright, smooth-polished section has been manufactured by us for nearly 30 years.

We make a full line of
BEE-KEEPER'S SUPPLIES.

Early order and quantity
discounts. Catalog free.

W. T. Falconer Mfg. Co.
Falconer, N. Y.

CLUBBING OFFERS

Everybody knows about the Bingham smoker. The Conqueror size gives sufficient smoke, and is as good as a larger size, except that it needs filling a little oftener. The price, postpaid, is \$1.00, but I will send the Review one year and a Conqueror for only \$1.75.

Twentieth Century Smokers have a diameter of $3\frac{1}{2}$ inches, are 7 inches deep, have a double draft, double walls lined with asbestos, a hinged, one-piece cover, and the bellows is fastened on with ribbed steel brackets. The price, postage paid, is \$1.25, but I will send one with the Review one year, for only \$1.75.

Advanced Bee Culture is a beautiful book, delightfully written, neatly printed, lavishly illustrated and handsomely bound, but, of greater importance, the reading and heeding of its contents will put any practical bee keeper on the high road to success. A new edition will soon be out. It will be largely re-written and much new matter added. Price \$1.00, or the Review one year and the book for only \$1.90.

A good fountain pen is a great convenience, and the Parker certainly fills the bill. I have carried one for years, and I know. It does not leak and daub the fingers, while the "lucky curve" feature makes the point always inked, ready for business. The \$2.00 pen is exactly as good as any pen that is made; the higher priced pens simply having more fancy handles. For \$2.50 I'll send the Review one year and a \$2.00, Parker, gold fountain pen.

The Advanced Bee Veil is the most satisfactory veil that I have ever worn. It is not tucked inside the collar, but is fastened and held down firmly, by a cord, out on the shoulders, several inches from the neck, thus making it simply impossible for the bees to sting the neck through the veil, as is the case with an ordinary veil. Price of the veil is 60 cents, but I'll send the Review one year, and the veil, for only \$1.50.

In my estimation, few apicultural writers are the equal of E. D. Townsend of Michigan. He has had a long, wide and successful experience, and knows how to tell about it in that plain, simple, straight forward manner that is so easily understood. I was more than delighted when I learned that he had written a book on bee keeping. While it is especially for beginners, it has much of value in it for the veteran. The price of the book is 50 cts. or I will club it with the Review one year for \$1.35 for the Review and book.

W. Z. Hutchinson
Flint, Mich.

The Imperial and Royal Agricultural Association of Carniola, Austria.

EXPORTS ONLY

Strictly Pure Carniolan Alpine Bees

The above named association, founded in 1776, counts as its members many thousand Agriculturists of the Austrian province Carniola, among whom are many successful breeders of the pure Carniolan strain of bees—gray workers. The Association is under the protection of the Austrian government, and the officials of the same are appointed, paid and controlled by the Imperial and Royal Agricultural department in Vienna.

To insure the blood of the exported Carniolan Alpine Bee, and to maintain her name as the best of honey producers, possessing all other characteristics which experienced bee keepers appreciate most—for this purpose the Secretaries of Agriculture and Commerce of the Austrian government, this new venture of the above named association have sanctioned and subsidized. Direct shipment of Queen Bees select tested \$5 00, U. S. money, and stock in hives to all parts of the world. For further particulars address

The Imperial & Royal Agricultural Association

Ljubljana, Carniola Krain, Austria

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.



16 CENT SEED SALE

10,000 KERNELS OF
Selected FERTILE SEEDS for 16c

1500 Lettuce	1000 Celery
1000 Onion	100 Parsley
1000 Radish	1500 Rutabaga
100 Tomato	1000 Carrot
1500 Turnip	100 Melon
1200 Brilliant Flower Seeds, 50 sorts	

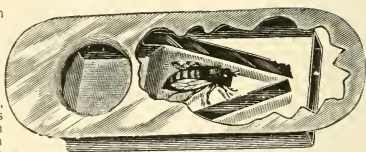
Any one of these packages is worth the price we ask for the whole 10,000 kernels to start with. It is merely our way of letting you test our seed—proving to you how mighty good they are.

Send 16 cents in stamps to-day and we will send you this great collection of seeds by return mail. We'll also mail you absolutely free our great catalog for 1911—all postpaid.

JOHN A. SALZER SEED CO.,

213 South 8th Street,

LaCrosse, Wis.



Advantages of BEE ESCAPES

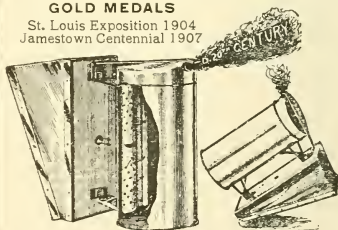
No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

GOLD MEDALS

St. Louis Exposition 1904
Jamestown Centennial 1907



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the valveless metal-bound bellows up and down the fire-grate gives a combined hot and cold blast.

The side grate forms a double wall for fire, and riveting the braced brackets, fastened to bellows by bolts with lock nuts.

The cap is one piece—cannot clog.

It is the Largest Smoker sold for a dollar.

Guaranteed to suit or refund price.

Price \$1.00; two \$1.60; by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2.00. We sell Danzenbaker hives and supers with metal propolis shields and anything in bee supplies at factory prices.

Send your address and B— friends for catalogs.

F. DANZENBAKER, Norfolk, Va.



When Clover's in its Prime.
Home-aplary of Leonard S. Griggs, Flint, Mich

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIV.

FLINT, MICHIGAN, JANUARY 1, 1911.

NO. 1

The Production of Comb Honey as Compared With that of Extracted.

LEONARD S. GRIGGS.



HERE seems to be an increasing tendency to abandon the production of comb honey for that of extracted, but I firmly believe that the man who is well-located and equipped for the

production of either kind better do a lot of thinking and investigating before making any radical change; and let us not forget that a stampede to extracted honey production means a scarcity of comb honey at a higher price. For years I have produced both comb and extracted honey, sometimes a whole apiary has been devoted to one kind, and sometimes there has been a combination of the two in one apiary. According to my experience, the comparative advantages and disadvantages of producing the two kinds, are something as follows:

Most of the work in producing comb honey may be done in-doors. Putting

together sections, putting in foundation, cleaning sections of propolis, grading and crating can all be done in the comfort of the honey house. The only outside work is that of putting on and removing supers, and hiving swarms, if swarming is allowed. There is little heavy lifting to do, and, if bee escapes are used, the removal of the supers is little more than fun.

Comb honey sells at a higher price than extracted, and usually meets with a more ready sale; especially early in the season.

When an apiary is devoted to the production of comb honey, the colonies are usually heavier in stores in the fall, thus making a saving in the amount and labor of feeding.

If foul brood, or any contagious disease, finds its way into an apiary, it is much more readily controlled and eradicated in a comb honey apiary.

DISADVANTAGES OF COMB HONEY PRODUCTION.

In producing comb honey, there is an expense, each year for supplies—sec-

tions, foundation and shipping cases. It calls for more work, especially that of a skilled order; consequently, not so many bees can be kept. Swarming is more difficult to control.

When there is a poor season, or interrupted honey flows, not much first-class honey will be secured.

If the crop is abundant all over the country, and prices are low, it is scarcely practical to hold comb honey over for a raise in prices.

Comb honey is very fragile, and there is great danger of breakage in shipment; particularly so in cold weather.

Not so many pounds, per colony, of comb honey can be secured.

The production of extracted honey calls for less labor, and much of this can be of the unskilled order. Swarming is very easily controlled. These two factors allow of the managing of a larger number of colonies. Fewer visits to the apiary are necessary; as super room may be given in advance of the needs of the bees, as it is *quantity* that we are after, not *appearance*. Quality may be secured by giving the bees time to ripen their product.

Even in a poor season, we may secure a fair crop—certainly every pound that is gathered. If the crop is abundant, and prices low, the crop may be held indefinitely, for better prices.

Once an extracted honey apiary is equipped with surplus combs, supers, and other appliances, there is no more expense, except that for honey cans, or barrels, in which to store the honey; and, as soon as the honey is extracted, if it may run directly into these receptacles, when it is all ready for immediate shipment. There is no sorting, nor cleaning off of propolis, nor crating for shipment.

If good packages are used, there is practically no danger of loss in shipping extracted honey any distance at any time of the year.

In producing extracted honey there is much heavy lifting and hard work that must be done in hot weather, or in a hot room, that the honey may be thin enough

to leave the combs readily, and pass through the strainer.

If a light colored flow of honey is immediately followed by a dark flow, as that of buckwheat, it is impossible to keep the two kinds separate, and have all of the honey well-ripened. The last gathered of the white honey must be left in the combs to go in with the dark honey, otherwise it would be unripe when extracted.

Extracted honey brings a lower price, and is not so salable, especially early in the season.

The colonies worked for extracted honey are almost certain to be short of stores in the fall, thus calling for the expense and labor of feeding.

One of the greatest objections to the production of extracted honey is the increased difficulty in combating foul brood as it appears in the apiary.

COMBINING THE PRODUCTION OF THE TWO KINDS OF HONEY.

As a rule, there is less complication, and more profit, in producing only one kind of honey, but the man who produces both kinds is often able to thereby make sales earlier in the season, which is sometimes quite a help to the man without a bank account.

I have also found one advantage in producing both kinds of honey in the same apiary, and that is this: We often find a colony here and there which is very backward about beginning work in the comb honey supers, or is a very slow or poor comb builder. Such colonies will often do excellent work if given extracted honey supers.

THE WRITER'S PREFERENCE.

I am still producing both comb and extracted honey, and may continue to do so; but, if I were to drop either, it would be comb honey.

I can keep more bees with less labor, and much of that unskilled, in producing extracted honey.

FLINT, Mich., Dec. 14, 1910.

Selling-Methods Make Honey-Prices low Compared With that of Other Commodities.

OREL L. HERSHISER.



THIS is certainly a question of prime importance to a large majority of bee keepers, and you, Mr. Editor, have opened up a subject for discussion, which, if fol-

lowed persistently, will, in my opinion, yield to your readers handsome returns. To produce a crop of fine honey should be the highest aim of every bee keeper; but just a little lower than that highest aim should be another one; viz., to sell the crop at its full market value.

PRICES OF HONEY HAVE NOT KEPT PACE WITH THAT OF OTHER FOOD PRODUCTS.

You, Mr. Editor, believe that "market conditions are vastly superior to what they were years ago." I fancy that I am one of many who do not wholly accept that view. Years ago, in the 80's and 90's, honey was selling a little lower than at present. My recollection is that fancy comb sold as low as from 11 to 13 cts., when the market was at the lowest ebb, and white clover and other fancy extracted as low as $6\frac{1}{2}$ to 7 cts. But remember, that was when wheat, that makes the "staff of life," was selling at from 45 to 60 cts. per bushel. I well remember that, in the summer of 1894, wheat in Northwestern Ohio was selling as low as 42 cts. per bushel. All other products and provisions were low. It was only natural that honey should be low. As compared with prices in those days, wheat is more than $2\frac{1}{2}$ times as high; hogs more than twice as high; and farm land is certainly from 25 to 35 per cent. higher. In 1894, with wheat at 45 cts. per bushel, and best, extracted

honey at $6\frac{1}{2}$ cts. per lb., it took approximately 7 lbs. of honey to purchase one bushel of wheat. Now, with wheat at \$1.15 per bushel, and best, extracted honey at 9 cts. per lb. (and I think a lot of bee keepers would like to know where they could get 9 cts. net) it takes 12 7-9 lbs. of honey to purchase a bushel of wheat. To make it an even shake, we would have to have 16 3-7 cts. per pound for the honey. In other words, with wheat at \$1.15 per bushel and honey at 16 3-7 cts. per pound, it would require 7 lbs. of honey to purchase a bushel of wheat, same as it did in 1894, when wheat was 45 cts. per bushel. Likewise, when pork, live weight, was 5 cts. per pound, it took approximately 7 lbs. of honey to purchase 9 lbs. of pork, or 45 cts. worth. Now with pork, live weight, at ten cts. per pound, it takes 10 lbs. of honey to purchase the 9 lbs. of pork.

In this comparison we would have to get 12 6-7 cts. per pound for our honey in order to get the same equivalent as in 1894.

I might compare the prices of butter and eggs, two great staples, with honey in the same way, and with similar results, and so on, with almost everything used by the husbandman. I tell you, honey is ridiculously low, and conditions from my view point are not "vastly superior."

Another reason why honey should be higher is that it costs more to produce it. Sections and hives are much higher than when lumber was cheap. And comb foundation is higher because b-e-c-a-u-s-e—not because wax is so much higher, not because it costs more to manufacture, not because of the use of new and improved machines and processes that turn out the finished product many fold faster than did the old

methods, but just because the manufacturer gets a larger profit.

SOME OF THE REASONS WHY HONEY IS TOO LOW IN PRICE.

Why is honey so low and everything else so high? Oh, there are numerous reasons. One reason is the ignorance of a great percentage of bee keepers.

IGNORANCE OF BEE KEEPERS ONE CAUSE FOR LOW PRICES.

It is really surprising how many bee keepers there are who produce honey in considerable quantity, and take no bee periodical, and hence are way behind the times, and know nothing of markets or crops beyond their own neighborhood. They produce a greater or less crop of honey and they cry: "What in the world will I do with it?" A man of veracity and an acknowledged expert with bees, informed me less than four weeks ago, that he recently ran across a bee keeper who had produced a crop of about 1,000 pounds of section honey, which would grade from No. 1 to fancy, part white and part mixed, who was in "straits," and did not know what to do with it. "How much do you want per lb. for the lot" queried the bee keeper expert. "Oh, I'll take 6 cts.," replied the distressed farmer-beekeeper. "It is sold," responded the expert, who forthwith had it packed, and on his way home stopped at the farmer bee keepers' home-town and sold the lot at 12 cts.; not because it was not worth more, but because he was satisfied with "small profits and quick returns."

HOW THE DEALERS' "SMARTNESS" TAKES ADVANTAGE OF THE PRODUCER.

Bee keepers who do not know what to do with their honey when they get it, and will not inform themselves, influence the market downwards, and dealers are too ready to quote the lowest figure as the ruling price when purchasing. The dealer has the advantage in his thorough acquaintance with markets. He thinks and talks consecutively and almost automatically. With all his knowledge

and resourcefulness that is born of constant practice, is it any wonder that he has the bee keepers who do not inform themselves at a disadvantage? The tradesman has a highly developed faculty of writing and talking in a confidential style, just as though he were studying how he could render the greatest service to the bee keeper, and the latter, in most cases, fails to understand that the average tradesman is talking into his own pockets and serving, the while, his own interests.

Take some of our honey market quotations for example. I have noticed in one of the bee journals the quotations from one of the prominent honey merchants several times during the past season in which the complaint is made that owing to "high prices honey is not moving off as rapidly as expected." That some producers have been inclined to hold their crops for exorbitant prices, and they are now offering them at "*much less*," which has a tendency to "*drop*" the market some. And near by, in the same journal, the same parties advertise for honey and state the large quantity being handled.

The demand for honey indicates that it is moving. If we had not been up against the game of "bluff" a few times, we would wonder why such a paradox.

DON'T SHIP HONEY TO MARKET UNTIL IT IS SOLD.

An extensive bee keeper, who produces honey in large quantities, related to me a remarkable transaction in the disposition of a quantity of honey a few years ago in New York. A bee keeper of the South had produced and shipped to New York several thousand pounds of fine, extracted honey, the same being contained in barrels. When the shipment reached its destination the bee keeper was on hand to sell his crop, and, approaching one of the prominent honey merchants of the city, he stated that he had his crop of honey down at the docks, and inquired the price. After an examination of the goods a ridiculously low offer was made;

probably on the theory that the producer was helpless with his honey in the city and unsold. The bee keeper declined his offer for the time, and stated that he would look around and see if he could do better. The dealer had no fear of losing the chance of purchasing the honey, for he had a 'phone, and when the bee keeper got around to the other honey merchants' establishments he received exactly the same offer as the first. He returned to the dealer who gave him the first quotation to talk over the situation, and finally decided, and stated, that before selling at the quoted price, he would run up to Boston and see what he could do there. But there are wires between New York and Boston, and evidently they had been used, for when the bee keeper arrived in Boston, quotations were the same as in New York,

and the bee keeper was finally obliged to sell his honey at the first quotation.

This transaction was related to my informant by the dealer who made the first quotation and who is said to have slyly intimated that the telephone and telegraph had been used with such disastrous effect in plucking the bee keeper.

Bee keepers, if you are ever caught in a similar predicament, do not "fall down" too easily. Remember, that while there are dealers who would pluck you, that there are also friends who would aid you. There are storage warehouses in large cities that are glad to store goods at a fair rate, and a few days' time is all that is required to communicate with some of the editors of the bee journals for advice, or with reliable dealers in other quarters.

Continued next month.



Only one Disease Called Rheumatism, and Bee Stings Won't Cure That.

A. F. BONNEY.



I differ from my worthy rural colleague, in that I have but one emotion on reading the many articles written by bee keepers, and some medical men, about rheumatism, and,

incidentally, the poison of the bee as a remedy for it. Editorial comments alike excite my pity, for if I know anything, it is that there is but one disease called rheumatism, and that is what is variously known as Rheumatic Fever, Inflammatory Rheumatism, Articular Rheumatism. I know doctors speak of "Muscular Rheumatism," while admitting that it is Myalgia. They also talk about "Gonorrheal Rheumatism,"

while it is only a name for pains in the joints resembling rheumatism in those who have gonorrhea.

Of course there are various conditions arising from an acute attack of rheumatism which we call chronic, but the cause is the same. It is rheumatism "gone to seed," with the bent bones, the hardened tendons, the ossified joints. These in no wise disprove my assertion that there is but one rheumatism, and I opine that no bee keeper ever got to treat (with bee stings) an acute case.

Some of the statements you comment on in the article copied from *Gleanings* are all right. For instance, "anyone who is looking for a cure for rheumatism is searching for what he will never find," though "never" is a long time, and until now I had hopes that the Art of Healing might advance. I am doubly surprised that my colleague thus puts a bar to

progress, for he unmistakably belongs to a "school" founded by Mr. Hanneman to reform the medical practice of the world. This is apparent in paragraph 5, and others which follow, as in 8, he states that "the virus of the bee is a commodity in the drug market," for the writer has been a pharmacist for 30 years, and never saw nor heard of bee sting poison as a medical remedy until he began investigating the reputed "cures" by bee stinging. "It is to be had from pharmacists for dispensing," is not an exact statement of fact, for not one of the catalogs of pharmaceutical products which I have, contain mention of any such a drug, and, for fear of being in error, I wrote to one of the very largest manufacturers of pharmaceuticals, and they add their testimony that there is no such a drug as *Apium Virum*, while a homeopathic physician to whom I wrote quotes me *Apis Melifica*, their remedy for rheumatism, "where the swelling simulates the swelling caused by the sting of the bee." I am at a loss to place Country Doctor.

"Those who know how to use it, and who understand its clinical indications, rely upon it with as much confidence as is reposed in any drug." If the editor of *Gleanings*, or the *Review*, will make out a list of 50 doctors belonging to the traditional school (allopathic) and ask them if this statement is true, they will, in each and every case, receive a negative reply, but the same number of queries sent to homeopaths will be replied to affirmatively.

There is a mean saying current among practising physicians in this part of the world: "If a man cannot make a living in general practice, he will start a hospital." That Mr. Root seems to find it necessary to fortify A Michigan Country Doctor's misstatements is the only reason I mention it.

That a Michigan Country Doctor is at least careless, is demonstrated by the remark he makes in paragraph 2, where he says: "Some have fever with rheum-

atism, and are sick abed." I wonder if he ever saw a case of rheumatism where there was not fever. The rest of the paragraph is so distinctively homeopathic that, case-hardened old allopath that I am, I shall not discuss it.

The above was written in a spirit of pitying levity. Now to be serious: The superstition that the sting (poison) of the bee is a cure for inflammatory rheumatism originated with the homeopaths, and is based on the postulate that "like cures like," and the remedy to be effective must only be applied where the "form" of rheumatism simulates the effect of the poison locally applied, as in case of a sting by a bee. For this they use a dilution in alcohol or sugar of milk, and 3 x is the favorite strength, and equals a 1 to 1,000 mixture. One drop of bee sting poison in 1,000 drops of alcohol or grains of sugar of milk; and a Michigan Country Doctor does not say that bee stings used hypodermically is a cure for rheumatism. Hence I guess he is homeopathic.

I have often within a year been referred to a German doctor who has made some wonderful cures, and writing to England secured a copy of the *British Bee Journal* in which he recited one of the man's cases. He gave a patient a matter of 15,000 stings within four years, and cured him. I have written to more than 100 doctors within a year past, 99 of them being of the traditional school and one a homeopath. The latter was the only one who claimed to know anything about bee sting poison as a remedy for the disease mentioned. None of the others who wrote me knew of such a remedy, though one did suggest that "the remedy would be worse than the disease."

If, as the homeopaths, including our Michigan Country Doctor, claim, the vastly diluted poison of the honey bee given internally will "cure" rheumatism, why torture the sufferer with stings, for more than a few stings is torture. I am about as stoical as the average, but half a dozen stings applied to one spot, as the

inside of the forearm, will drive me to shelter. Imagine, then, what it must be applied to a tender, swollen joint. Any one who will apply such a remedy is worse than a quack, he is a heartless fool.

There is but one form of rheumatism, which is rheumatism itself.

There has not yet been discovered a radical cure for rheumatism.

Rheumatism is a self limited disease. It continues from one to six weeks, then abates without treatment of any kind; but may assume the chronic form. It very often does, whether treated or not.

Chronic rheumatism may hold a person bedfast for weeks, then may apparently leave them, but in a week, month, year or decade, it may return, and all so-called "Cures" and "Reliefs" depend on this peculiarity of the disease.

"Patent Medicine" men know this well, and guarantee to cure. Hum.

For a year past the bee journals have been filled with alleged cures by bee stings. Why do not the editors write to

some doctor of repute, say one of each school, and, getting the opinion of educated men, print that instead of articles by men who do not know myalgia, plumbism, gonorrheal and syphilitic pains from rheumatism?

After reading Gleanings, the Review, the British Bee Journal and scores of newspaper articles, I wish to go on record as saying that there is not a well authenticated case of rheumatism cured by the poison of the bee.

An Iowa Country Doctor.

BUCK GROVE, Iowa, Aug. 31, 1910.

[The general public and many physicians, have classed as rheumatism several forms of aches and pains; and judging from reports, some of these forms have been relieved by the application of bee stings. Dr. Bonney asserts that, according to strict medical science, there is only one form of rheumatism, and that is never relieved by bee stings. It seems to me that the argument is largely in regard to *terms* rather than *facts*.—EDITOR.]



A Veteran's Views on Selling the Honey Crop to The Best Advantage.

J. E. CRANE.



Friend Hutchinson:—I fear I can add but little to your instructive and stimulating editorial in the May number of the Bee Keepers' Review, on "Selling Honey to the best advantage." The fact of working for months to produce a crop of honey, and then selling it in fifteen minutes, looks on paper as though something were wrong, but I think not so much so as would

seem; at least in this part of the country. Those bee keepers who read bee journals usually know what honey should sell for, and those who do not read them, are not slow, hereabouts, in inquiring of those who do. In fact, I think those who do not read nowadays are apt to ask *more* for their honey than those who are well posted.

The production of a crop of honey requires months of manual labor, while the selling is a mental process, and can be done by a person of active mind in a very few minutes.

The great problem is, how to get our honey to the consumer with the least possible cost. I have said to myself,

over and over again, it is too bad that honey that the producer receives only seven or eight cents for, should cost the consumer from twenty-five to forty cents a pound; but 'tis often so. These suggestions you make as to the necessity of studying the problem is a good idea.

The value of bee keepers retailing their own crop, either by peddling or through mail orders, cannot be worked in some sections; where population is sparse it is doubtful if it will pay. [A mail order business is all right anywhere—EDITOR.] Some of my neighbors, in seasons when the price of comb honey was low, have carried it over a year, and sold when prices were much higher, with decided profit; but we can hardly advise the average bee keeper to do this; and yet, a skillful bee keeper with the right conveniences will make it pay.

For more than forty years I have produced honey in considerable quantities, and bought and sold also, and can look on both sides of the subject with some degree of fairness. Sometimes those who have bought my honey have lost money in so doing, and this always makes me feel bad, and, sometimes, we have bought honey only to little or no profit, or even an actual loss.

What you say as to the manner of putting up honey is to the point. In the long run, honey well graded, will bring more than honey poorly graded.

THE FOLLY OF DISHONEST GRADING AND PACKING.

We have found cases packed with well-filled combs outside, while those in the center were little more than half full, if that. In one lot, a year or two ago, we found combs a year old, granulated nearly solid, and the cappings cracked and wet with honey, packed with new honey. Those who pack in this way would do well to think about marketing fifteen days instead of fifteen minutes.

I remember, many years ago, I was puzzled to know what honey would bring, or was worth. All the honey quotations

I could get were from the New York Tribune; and these were meager indeed. So I left my work and went to New York City, 260 miles away, and learned that honey was unusually scarce and high. I came home and bought all the honey I could find for sale, about 2,000 lbs., got it ready and shipped with my own, some 6,000 lbs. in all. I paid every one, of whom I bought, all he asked, from 27 to 30 cents a pound, and, after deducting commission and expenses, netted about 35 cents. I should probably have sold outright for 30 cents early in the season, but, by taking the trouble to look up the markets first, it netted me five cents more, or \$300, on my own with what I bought.

That was in 1872, before bee journals gave us every monthly or semi-monthly, the size of the crop and the prices in all the principal cities of the country. And, while I made well on the sale of my honey, it is doubtful if those of whom I bought, could have paid what it cost me to find out what the market was, and made any thing, as they did not have enough to make it pay. But times have changed, and all may know just about what honey should sell for, in a very short time.

PROFITS MADE IN SAVING FREIGHT.

We still buy honey, paying the producer what it will net him by shipping to the large cities. It costs us about the same to sell honey that it does the large wholesale dealer, but, if a man sells to the city dealer he has to ship it to him, and then it has to be shipped out again. We ship more direct. Suppose a man up in Maine wants fifty cases of honey, we can sell and ship to him direct, while my neighbor who sells to a wholesale house in Boston, and pays cartage from railroad station to store house, and back to the railroad station, and then the freight to Maine, which would amount to about a cent more a pound than it would for me to ship to him. A cent a pound is a small profit, for there is considerable risk in shipping comb honey; but the use of corrugated cases has

eliminated the risk to a considerable extent, and are very helpful in shipping a few cases to the retail dealer without extra packing. A large amount of honey in former years has been sent to Boston to be sold, and then sent back into our State, sometimes only a short distance away. We are trying to save this expense.

DIFFICULTIES AND EXPENSES IN BUYING AND BOTTLING HONEY.

You say that good extracted honey ought to bring 10 cents a pound and you are right, but I fail to see how one can afford to pay that price for bottling. It seems almost incredible that it should cost so much to reach the great mass of consumers. The cost of honey, the cost of bottles, and labels, freight on bottles and honey, and again on both when put together, as all go for honey, the loss from breakage, the loss from honey left

in tin cans, or from filling defective bottles, or leaky cans, or some of light weight, the time and fuel, will run up to nearly 20 cts., and then the retail dealer wants from five to seven cents for his trouble in selling, and this leaves but little to pay for bottling. Only last week, in melting up a few hundred pounds of honey, one can had a nail hole in the bottom, and, of course the most of the honey ran out into the tank of warm water, the water running in to take its place. Out of 96 dozen pound bottles, 22 were defective, had a crack or a very small hole in the bottom, not discovered until partly or wholly filled with hot honey. I am hoping that the use of paper bottles will help us out some in the sale of extracted honey. At ten cents a pound I believe the honey producer has decidedly the best end of the business.

MIDDLEBURY, Vt., May 11, 1910.



EDITORIAL

The poorest man, the ground above,
Is he who lacks a woman's love.

Men who mind their own business succeed so well, because they have so little competition.

The Review is now printed on a new Babcock-Optimus press costing \$2,000—the finest press in the city.

Clubbing Rates on the Review and Townsend's Bee Book are \$1.35—not \$1.25 as given in former advertising.

Extracted versus comb honey production is a vital, living subject. The first article in this month's Review touches upon some of the leading features. If any of my readers can mention other points, I shall be pleased to hear from them.

The Michigan association of bee keepers now numbers 238 members, and she is doing more for her members, in a practical way, than any other similar association.

Rearing and mating queens from above an excluder is a topic that a subscriber would like discussed in the Review. If any reader has had experience along this line, I would be glad to pay him for telling about it in the Review.

The Jones System of preventing swarming was advertised very extensively a year ago, and several hundred books sold. It was also copied into the Review; but I have heard almost nothing from those who gave it a trial. If anybody gave the plan a fair trial, I will pay him to tell about it in the Review.

B. A. Hadsell of Buckeye, Arizona, one of the largest bee keepers in the world, has made three trips to Mexico investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated pamphlet describing the tropics of Mexico as the Bee Man's Paradise, which he will mail free by addressing him. B. A. Hadsell, Lititz, Pa.

Honey Secretion, or the law governing its secretion, still remains something of a mystery. For instance, R. F. Holtermann writes that he has had good crops of honey when clover was scarce, and poor yields when it was plentiful. I have had similar experiences. It sometimes seems as though electrical or atmospheric conditions contained the secret, but exactly how we don't know. Perhaps, if we did, it would not help us any.

Overstocking is an elusive question. Sometimes I have felt that we paid too much attention to it—feared it too much—then something will turn up to make me fear it. For instance, W. L. Coggs, of New York, who has been a very successful bee keeper, writes me that he made the most money out of bees in 1881 with only 100 colonies. He gives as a reason that the winter losses were so great that only a few bees were left in the country—there are 10 colonies now where there was only one then.

Election of officers for the National resulted as follows: President, Geo. W. York, Chicago, Ills.; Vice President, W. D. Wright, Altamont, N. Y.; Secretary, E. B. Tyrrell, Detroit, Mich.; General Manager, N. E. France, Platteville, Wis.; Directors, Jas. A. Stone, Springfield, Ills.; O. L. Hershiser, Kenmore, N. Y.; H. A. Surface, Harrisburg, Penn. All these

men are well adapted to the places they are to fill; and I am especially pleased with the choice of Secretary. Mr. Tyrrell has done wonders for our Michigan State convention; and I prophesy that the National will double its members and usefulness inside of two years.

Have Faith in Your Business.

I have a feeling of kind regard, in fact, I might almost say, affection, for bee keepers. I like to see them succeed. I am doing all in my power to help them to succeed. I wish to drive from their minds all doubts and fears, and hesitancy. I wish to inspire them with faith in their business; so that they will dare to go ahead and increase their business; and start an apiary here and another one there, and make money so that they can ride out to their apiaries in an automobile. When I am dead and gone I wish to deserve the epitaph: "He taught us to keep more bees."

Which was your most Prosperous Year?

What year, or about what year, did you make the most money out of bees?

How much honey did you produce, and which was it, comb or extracted?

How many colonies did you have?

How and where did you market it, and what prices were obtained?

What were the peculiar conditions that enabled you to secure such wonderful results that year?

Is there any reason why they may not be repeated in the future? If not, why not?

Extracted Versus Comb Honey.

Ernest Root recently told me that most of us would be surprised at the extent that bee keepers are dropping the production of comb honey and taking up that of extracted honey. He says they are making this change simply because they can thereby make more money. But here is a thought: When the

pendulum swings one way, it is quite certain to swing the other way. If too many desert comb honey production, then comb honey will become scarce, and may reach a price where its production may again become more profitable than the production of extracted honey. I think that the bee keeper who is located in a good location for producing comb honey, and whose hives and fixtures and experience are all adapted to comb honey production, better keep on producing comb honey.

Nothing Like Actual Experience.

So thoroughly do I believe in specialty that, if it weren't for one thing, I think I should drop even the keeping of bees, for the work of editing the Review. A sentence from a correspondent's letter gives the reason very graphically. He says: "Your editorials come hot from the field of action." There you have it. Nothing enables a man to write of any work, like the doing of that work *with his own hands*. I think I can make the Review better by doing a certain amount of actual work with the bees myself.

Five Dollars a Day for Thinking.

In conversation recently with a prominent, Eastern bee keeper, he told of a neighbor who often left his work and spent an hour or more delivering two or three pails of honey to some customer. He said that this was decidedly bad business. If a man is going to peddle honey, let him make a business of it. The delivery of a small lot of honey by leaving regular business is done at a loss. "Why," exclaimed my friend, "my time is worth \$5.00 a day, just to sit down and *think*, and plan how to manage my work to better advantage."

That is the kind of man who succeeds; who does big things. The man who realizes that time is really valuable to use in "sitting down to think" about his business. The most of us ought to do more *thinking*, and perhaps we would not need to do so much *work*.

An Advertising Scheme for Increasing the Circulation of the Review.

No matter how good a journal a man publishes, it is of no value unless it has readers. In some manner it must be brought to their attention. They must first become acquainted with its merits before they will subscribe. In short, the publisher must advertise as well as publish. To secure and build up a paying list of subscribers to a bee journal is a long, hard, and costly struggle. I presume every subscriber that I now have has cost me, at least, \$2.00. Various are the schemes that I have worked, and I am now about to carry out a new one. It may be an *old* one, but it is new to *me*—originated in my own brain. It is as follows: I am printing 100,000 little slips setting forth the leading features of the Review, and these slips are furnished free to supply dealers who will enclose them in their own circulars. In consideration of the advertising thus secured, the Review will be offered on these slips to *new* subscribers at a *discount*, and, in addition, the dealers will also be allowed a commission on all subscriptions thus secured. A slip returned to the dealer who sent it out will entitle the one who returns it to secure the Review for *one year* at a discount. This is necessary to protect the dealer, otherwise subscriptions would be sent direct to *me*.

Why am I telling of this in the Review? Because half of my subscribers may receive these slips, and will be asking *why* this discount to *new* subscribers, and not to them? The Review could not exist if its regular subscribers did not pay full price; but I can afford to go to almost any length to secure new subscribers—to get men to reading the Review, to become acquainted with it, and to like it so well that they will keep on reading it, paying full price for it. To get them to make a start, there must be some extra inducement offered. I presume that nine-tenths of my present subscribers were

"induced" to subscribe by the offer of back numbers free, or of a queen at a discount, or of something of this sort.

There is still one more point: Old subscribers will be benefited by any scheme that brings in new readers. Each subscriber added to the list enables me to make the Review just that much better—to pay for better correspondence, or more and superior engravings, etc. So, if you should receive one of these slips, you will understand *why* this special offer is made through the dealers, to *new* subscribers, and not to old ones, and thus you will be able to rejoice, and hope that it will add hundreds of subscribers to the Review family.

Discouraging Specialty.

In talking recently with a young man who had made a success of bee keeping as a specialty, he said he thought the bee journals had been open to criticism on the ground of discouraging specialty. When he was starting in the business of bee keeping, he was often inclined to go into the business extensively, believing that he could thereby make some money, but every little while there would be an article in the journals, in which some "shining light" would advise against depending upon bee keeping alone, for a livelihood. It was too uncertain and precarious to be depended upon. It must be joined with some more dependable pursuit. He thought the publication of such articles had done much to retard the advancement of bee keeping. We don't see such articles any more, however, as the falsity of such a view has been disproven with too many brilliant examples.

A Special Request.

Several times I have asked favors of my subscribers, and they have never failed me, and I now have one to ask in which it seems they ought to be equally interested with myself. It is a simple request, and one that, it seems to me, can

be easily granted. I wish each reader to write and tell me what particular subject he would like discussed in the Review, and, if possible, give the name of the bee keeper in whose views he is particularly interested. For instance, just write on a postal something as follows: "I would like to have Mr. J. E. Crane tell me the most practical way to improve my stock—Wm. Streeter." Or: "Get Mr. Greiner to tell us how co-operation is working out in New York."—Orville Skinner." Or: "What is the best use that can be made of the honey that does not drain out of cappings?—John Williams."

The foregoing are given simply as samples. Now, *please*, dear reader, don't neglect this, nor put it off thinking: "Oh, the others will write; it won't be necessary for me." For once, put on your thinking cap, and decide just *one* thing that you don't know about bee keeping but would like to know. What is the one question that you would like answered, the one problem you wish solved, and, if there is any particular bee keeper in whose views you are particularly interested, let me know his name.

The editor of a bee journal does not always know in what particular subjects his readers are most interested. In many instances it would be an easy matter to secure the information, if he only knew what was wanted. If my subscribers will only take hold of this matter, it will do much to make the Review more helpful than ever. Once more let me urge you not to neglect this. Write this very day—do it right *now*.

A Convention Group of Big Bee Keepers.

It is seldom that the Review gives a picture of a convention group. As a rule, the faces must be too small to show the features distinctly; but I received one recently from "out west," (New Mexico) in which the faces were so large and clear, and the surroundings so attractive, that I was tempted to use it.

There are only about a score in the group, but these men probably produce

as much honey as the members of a group of 100 would usually produce. They are extensive bee keepers, produce honey by the car load; enough so that when they met in convention last October, and petitioned the Santa Fe to give them lower rates on honey, that they might

The market has not improved so much in the way of high prices, as it has in reliability and steady demand. It has also shaken off the curse of the commission business, and became a cash product. A steady demand, with *quick returns in cash*, is really more desirable



Convention Group of the Pecos Valley Bee Keeper's Association of New Mexico.

Members—commencing at the left—seated: Geo. E. Dudley, Ernest Nelson, J. W. E. Basham, W. N. Green, N. A. Palmer, R. B. Sleas, Henry C. Barron, M. M. Brayshaw, R. H. Crawford
Standing—B. H. Crawford, N. C. Smith, C. V. Bout, S. T. Crawford, R. N. Beers, W. H. Crawford, A. J. Crawford, Mrs. A. J. Crawford, Miss Irene Basham, Henry Adams. On porch—C. M. Hester and son, Bryan Foster.

compete with Danver, the request was granted.



The Condition of the Honey Market.

Bro. Hershiser is correct in saying that the price of honey has not, in the last few years, kept pace with that of wheat, pork, butter, eggs, and other produce. One reason is that honey is regarded as a luxury, and the price of luxuries does not go up in keeping with that of staples.

than high prices with slow, uncertain sales. A man can branch out now, and establish yard after yard, and produce just as much honey as he possibly can, with the full assurance that he can sell it for cash at any time, at a fair price. Bee keepers are becoming more enlightened, and adopting better methods of selling. The mail order business promises to be a large factor in the sale and distribution of honey. I have no expectation that the price of honey will ever be ex-

cessively high, unless it is in exceptional cases. Conditions are decidedly against any such result. However, when the producer can get ten cents a pound, wholesale, for white extracted honey, and eight cents for dark or amber as many of them are now realizing, conditions are not so bad; especially when we remember that improved methods allow us to "keep more bees" and produce much larger crops than in the past.



The Help that may Come from Reading.

I have referred to this subject before, but its importance is such that it is well-nigh impossible to say too much in its favor. A man's success depends largely upon his thoughts. Reading is not thinking, but it stimulates thought and arouses ideas. Great help comes from instructive articles, those that tell us "how to do things," but help also comes from reading that cheers, encourages, inspires, and arouses in us the proper state of mind.

A man can't know too much about his work. It is knowledge that brings success. If I were a farmer I should own, read and study a comprehensive farm library, embracing standard works upon every subject having a bearing upon my occupation. I should also read all of the leading agricultural journals. A bee keeper ought to read all of the leading text books and all of the journals.

Of course, my main business is that of a publisher, and I read everything that can possibly have a bearing upon that subject. For instance, I read the *Inland Printer*, *National Printer* and *Journalist*, *Printer's Ink* and *The Editor*. For the business end I read *System* and *Business* and the *Book Keeper*. Then I read other journals simply for the influence they may have on my mind. For instance, I read *Collier's*, or, rather, its editorials, because they are so short, vigorous, forceful and fearless. Such editorials as I admire and strive to write, and the reading of such week after week has its influence upon my own style. Then I

look over, and sometimes read, some of the popular magazines, such as *Success*, *Scribner's*, *Everybody's*, *Cosmopolitan*, *Hampton's*, *Saturday Evening Post*, *Ladies' Home Journal*, *Youth's Companion*, etc. I also often visit the news-depot of a friend and spend an hour or two in looking over journals and magazines for which I am not a subscriber. I like to see how other publisher's "do things" Of course, I read all of the bee journals and the photographic journals.

Let no one imagine that I read *all* of the matter in all of the magazines.. Perhaps I don't read *one-tenth* of the matter that comes into the house, but the part I *do* read is worth all it costs me. Here is the way I read: Sit down in a big rocking chair before the grate in the evening, with the electric light over my head. Pick up a magazine, and examine the first article, note the title, author and sub-heads, if any. Often that is enough. It's something that I care nothing about. Go to the next article, and treat it the same. I may find one that interests me enough to read, or glance at, a paragraph here and there. I can get at the gist of an article in about five minutes. Occasionally I come across an article that I care enough about to read it all through, from beginning to end. I seldom spend more than half an hour on a single copy of a magazine. When there is so much reading in this world in which a man has an interest, why spend time in reading that that does not interest him? Let him skim off the cream, as it appears to him.

Of course, it costs something to subscribe for so many magazines and journals, but, if they are well chosen, I believe it a most profitable investment. I would go without something else, rather than deprive myself of the best reading obtainable. In fact, I have the courage this winter to wear an old overcoat, instead of getting a new one, that I may thereby have the money for magazines.

In the foregoing I have written about myself, given my own experience, because I *know* of the help that has come

to me from reading. Brother, try just one year to read all of the matter that you can, bearing upon your occupation, and see if it does not prove the most profitable and enjoyable money that you ever spent.

—*—
JOHN CLINE.

The Man who has Kept Bees the Longest
of any one in this Country—86 Years.

Mr. N. E. France has often mentioned Mr. John Cline, of Darlington, Wisconsin, as being the oldest bee keeper in the country, so far as is known, and as having kept bees the longest—86 years. Thinking this might be of interest to my readers, I wrote Mr. Cline for his photograph, and some points regarding his bee keeping life. His reply is as follows:

DARLINGTON, Wis., Nov. 26, 1910.
Dear Friend Hutchinson:—

As I read your letter, memory went back to the days of other years, when I was a lad of seven. That was 86 years ago. At that time my parents lived in Mercer Co., Penn., and kept a few bees. My mother was a weaver of blankets; while I watched the bees. When a swarm issued, I rang the bell until the bees clustered on a rose bush. I would then set a skep close by and sweep the bees into it. For this work I was given a colony which I kept five years.

About that time the bee moth came to Mercer Co., and destroyed all our bees.

When I was thirteen, I worked two weeks for a German bee keeper, and he let me have a colony of bees, and showed me how to make skeps out of straw.

I kept bees in this manner until I was twenty, when I went to a place of my own, taking five colonies with me.

About this time the Quinby hive came into use. I bought a sample hive and the right to make and use them, and quit brimstoning the bees.

In the year 1850, May 20th, I sold my place and bees (25 colonies) and all personal property, and then moved to Wisconsin.

On the 4th of July I started out to buy a cow and some bees. I found a man who had five colonies in log gums. One colony was hanging out all over the log. I asked him if he would sell me a colony,

but he said no, he wanted to get more. Finally he said there was one with which something was wrong. It had plenty of honey, but the bees would not work, and I might have that for \$5.00. So I went to his place, in the evening, with a team, and got the bees home, and in only four



days they sent out a good swarm. In four years, I again had 25 colonies.

About this time the Langstroth hive came into use, and I transferred my bees into the Langstroth hives.

Since then I have kept from 40 to 100 colonies. I work for comb honey and get from 25 to 100 pounds per colony; and sell it from 15 to 20 cts. per pound.

I have a gasoline engine, and make my own hives, and foundation. I read all of the bee books and journals, and try to keep up with the times. I keep my colonies strong; winter them in a cellar, and don't lose any.

Yours truly,
JOHN CLINE.

—*—
Building a Bee Cellar and Honey House.

The Massachusetts Agricultural College has in view the building of a demonstration bee house, work shop, and cellar for wintering bees. Mr. Burton N. Gates is sending out a circular letter asking for suggestions in regard to details of con-

struction. He wishes to receive advice in regard to the general arrangement, the number of rooms, the size of the building, whether to have a bee cellar under the building or separate, ventilating, the extracting room (its appointments) etc.

It is intended to construct the building for an apiary of 100 colonies. There is a slight slope to the land which may allow both the cellar and the room above to be entered from a level with the surface of the ground.

I will give some of the points that come to my mind, and if subscribers think of other points I should be glad to hear from them.

Where the ground slopes, it is advisable to put the honey house at the lower side, as in carrying in the honey one goes down hill. If the cellar is separate from the honey house, its location is not so important, as if we can carry the colonies down hill in the fall, we have them to carry up hill in the spring. Of course, they may be a trifle lighter in the spring.

I see no advantage in building the cellar separate from the honey house, while the cost is lessened by putting it under the house; besides, the cellar is convenient when we extract honey, as will be explained later.

It is a little difficult to decide upon the best size for a cellar and bee house, but this much I do know, that I never heard a bee keeper complain that his honey house was too large—I have often heard him complain of lack of room. For an apiary of 100 colonies I think a house 24 x 16 would be none too large, and I would have an attic or upper story at that. About 14 feet is sufficient height. As a honey house is not in use winters, the walls may be of a single board. Put the boards on in an upright position, and batten the cracks.

Concrete, stone or brick are the materials of which cellar walls are likely to be built. It may be only a notion, but I am inclined to the belief that bees winter better when the air has a free

access to the surrounding earth. I like walls of narrow boards supported by posts. The only objection to such a wall is the lack of durability; and of course, this is a most serious objection. If a good building is to be placed above a wall, the wall must be of a permanent character. I once saw, in Northern Michigan a cellar wall that, to me, seemed an ideal wall for a cellar in which to winter bees. It was built from the waste from shingle bolts, laid up with mortar. These pieces of pine or cedar wood are about the size of an ordinary stick of stove wood. With the cellar bottom "grouted," and the walls of concrete, the bees put in there are pretty nearly "bottled bees." I think that the earth absorbs a large amount of gases and moisture that come from the bees. I think that brick is more absorbent than any other material from which a permanent wall can be built.

I would leave simply the bare earth for a floor in any case. I see no reasons for having any partitions in the cellar. Neither would I have any windows. I would have an upright, inside door, even with the inside of the wall, and two outside doors to the hatchway; these doors having the same slant as the surrounding earth. If the climate is very severe, the space between the outside and inside doors may be filled with straw.

I would ventilate the cellar through a large shaft passing up through all of the floors and roof, and covered on the outside with a hood. I would have this ventilating shaft at least a yard in diameter. Let each side be separate and in a single piece, and, when in place the four sides can be fastened together at the corners with hooks, or some similar manner. The idea is that this ventilating shaft may be taken down out of the way in the summer season. Possibly it might be left in place up stairs, but we want it out of the way on the lower floor in the busy season; one reason being that, when extracting, we wish to let the honey drop down through the floor into a

tank located in the cellar. The yard-square hole left in the floor upon removal of the shaft, may be closed with a trap door fitted into the opening, and, through this door should be an opening large enough to allow the honey to drop down into the cellar. In some honey houses, the floor is made on two levels. Perhaps one-third or one-fourth of the floor is made three or four feet lower than the rest of the floor. This difference in the levels allows the drop to be used in straining and canning the honey. On a side hill this arrangement can easily be made; but where there is a cellar under the honey house the honey can be strained and put into cans in the cellar. When extracting I would not strain the honey; simply run it into a large tank, and allow it to stand a day or two, when all particles of wax or other foreign substances will have raised to the surface of the honey and may be skimmed off. This is really straining honey by "gravity." This plan also insures a more uniform grade of honey. For instance, one year, at one of our yards there was just a little dash of basswood gathered. Once in a while some colony secured quite a bit of basswood; others did not gather any. The honey from the first mentioned colony would be quite strong with basswood, and, if kept by itself in a can might displease some customer. If the honey from 25 or 30 colonies were all run together in a large tank, there would be such a blend that the basswood flavor would never be noticed. Last fall, at one apiary, there was just a little goldenrod honey came in, in the same way. By first storing the honey in a large tank, the goldenrod flavor was all absorbed.

The joists for supporting the lower floor I would have one foot in width. Besides the regular floor (of matched hard maple) I would have a floor of cheap lumber securely nailed to the lower edges of the joists, and before laying the upper floor I would fill the space between floors with dry sawdust or planer shavings.

The Department of Agriculture in Ontario, Canada, after exhaustive experiments with packing materials for the walls of cold storage buildings, decided that there was no better materials than planer shavings—very much superior to sawdust for insulating purposes. A wooden wall filled with shavings ought to be protected from dampness, by using damp-proof building paper between the two courses of sheathing.

At the back end of the first story, or main floor, I would have partitioned off a space of about eight feet for a work shop. I would have a bench three feet wide and eight feet long placed midway against the outside wall, with a long window (long horizontally) just above the bench. I would have it made of two sashes, each of which could be slid back horizontally. If it should be necessary to warm up honey artificially in the fall, for extracting, this room could be used for that purpose.

If the stairs are placed in one corner of the building they will be the least in the way.

I would have a sash door in the front of the building. The glass lets in the light, and prevents collisions between two persons who may attempt to go out and in at the same time. Don't use a screen door. The odor of honey comes through it, and attracts a crowd of robber bees that are ready to dodge in the moment the door is opened.

With the exception of the window over the work bench, I would use the ordinary, two-sash windows, so arranged that the upper sashes can be lowered, or the lower ones raised. Cover the whole outside of each window with a screen of wire cloth, with a bee escape at each upper corner. There may be times when we don't wish to allow the bees to pass out through these escapes, and the escapes can then be stopped up with wads of paper.

Now, friends, what have I left out, and what have I put in that can be bettered?

Selected Articles.

AND EDITORIAL COMMENTS.

WINTER BEE KEEPING.

Some of the Things it is Well to Know
and Heed When the Bees are
in the Cellar.

For the giving of important and timely advice in a few words, I think that the following, clipped from Gleanings, is entitled to the palm.

From the correspondence that is coming into this office, it is evident that a good many do not understand some of the basic principles governing successful wintering in winter repositories. In order to clear up the problem, perhaps it would be well to advance a few tentative propositions, and here they are:

1. Too low a temperature (below 40 Fahr. if long continued) in a bee cellar will kill bees.

2. An excess of dampness in a cellar does no harm, necessarily, providing that the temperature is high enough, not lower than 45 or 50.

3. A low temperature, lower than 40 Fahr. and an excess of dampness, is a very bad combination, and will kill bees almost invariably. A high temperature, above 45, *but little or no ventilation*, will cause the bees to be uneasy. If the temperature is above 45 there should always be some ventilation. It should be continuous rather than intermittent at night, but better intermittent than no ventilation.

4. Bees can be wintered in a cellar without much ventilation, providing the temperature is held uniformly between 43 and 45, but they will winter much better if there is some air.

5. A cellar may be too dry, for bees in a cellar require a little moisture, possibly a wet sponge should be put in front of the entrances of some colonies.

Ideal conditions are, a nearly uniform temperature of 45 Fahr., a slight amount of moisture, *continuous* ventilation, and absolute darkness.

7. A very bad combination is a constantly varying temperature that goes down nearly to the freezing point and

then rises sometimes to 50 and 60 degrees. Such a variation is almost sure to cause disastrous losses before spring.

8. A high temperature, between 60 and 70, requires a great deal more ventilation than a temperature of 45. The higher the thermometer the more fresh air there should be. Too much can not be given when the thermometer shows 65 degrees.

9. The statement has gone out that bees do not need ventilation in a bee cellar. Fair results are sometimes secured when the mercury can be maintained at 45 degrees, within two or three degrees, but far better results are obtained when there are continuous infusions of fresh air, air having been warmed somewhat by going under ground, and the foul air passing out through the top of the cellar.

10. Occasional disturbance from the bee keeper entering the cellar does no harm.

11. Where the conditions in a cellar are such that there will be anywhere from three to four and even six inches of dead bees on the cellar bottom in the spring we should say that the owner of that cellar ought to investigate and ascertain the trouble. No matter if he does bring his colonies through alive, it could hardly be said that he was wintering his bees successfully. An ideal cellar is one that will bring the colonies through the winter in practically the same strength as when they went into winter quarters. We have seen a good many cellars where all the dead bees that would fly out on to the cellar bottom would not make a coalhodful to the hundred colonies in the spring. We have wintered bees at Medina time and time again in one of our cellars so successfully that one could walk across from one end of the cellar floor to the other in the spring and scarcely step on a dead bee. Do not let any bee keeper get it into his head that those old bees are superannuated and would die anyway. In any cellar where the conditions are such that there will be two or three inches of dead bees on the cellar bottom in the spring, there is something wrong.

12. Honey-dew, or very dark or an unpalatable or poorly ripened honey may cause dysentery before spring, even when all the other conditions are ideal.

13. Pollen in the combs does little or no harm. The old theory that pollen was the cause of much of our winter losses is now an exploded myth.

14. The size of entrances will depend upon the character of the cellar.

15. Shutting bees in the hives with wire cloth is usually attended with uneasiness; and, unless removed, there will be severe mortality.

BURR COMBS.

Why They Should be Scraped from the Top Bars.

Some time ago I asked in the Review why burr combs ought ever to be scraped from top bars. Dr. Miller, in Gleanings, replies as follows:

Some time ago Editor Hutchinson said he never scraped burr combs off top bars, and asked if anything was gained by it. I don't know about extracting; but I know that, if they are left year after year, combs will finally be built between top bars and sections, and, what's worse, honey will be there. I don't want the bottoms of sections muddled up in that way. [Same experience here.—ED.]

All of my comb honey has been produced over honey boards and I would never think of attempting its production without their use. Cleaning off the burr combs in the spring does not prevent the bees from building another set and attaching them to the sections.

BESTOWING PRAISE.

Don't Withhold it When it is Due.

I think many men fail from a lack of appreciation and encouragement. Many a man has dated his success from the day that some one gave him deserved praise for work well done. On this point, Smith's Magazine says:

Don't be afraid to praise people. It is all very well to say it hurts a boy or a

man or a woman to praise; there may be those who do their best work without encouragement, but let us remember that nearly all of us living on this earth are human beings, and human beings work best when encouraged.

It is a great mistake not to tell people when you are satisfied with them. If the cook sets before you a dinner fit for a king tell her so.

Don't be too lofty to praise the office boy if his work is commendable. Tell him so.

It is harder for some people to give praise than it is for them to give money. Many a generous man is very niggard of praise?

Do you like to be praised yourself? Then depend upon it the other fellow will like it.

Pour the oil of encouragement on the wheels of progress and watch 'em whirl.

COMB AND EXTRACTED HONEY.

Some Good Reasons for Producing Both In the Same Apiary.

One of the live subjects at present is the comparative advantages of producing comb or extracted honey. Many are dropping comb honey production for that of extracted. It may not be generally known, but there are decided advantages in a combination system of producing both kinds in the same apiary. Extracted honey may be produced exclusively to good advantage, but a comb honey producer can secure some great advantages by adding extracted honey to his products. I think these points have never been explained, or brought out more clearly than they were in an article contributed to the Review several years ago by Jas. A. Green of Colorado. Considering the increased number of readers that have since joined the Review-family, and the special interest that now attaches to this subject, I feel justified in reproducing the article. Mr. Green wrote as follows:

Most bee keepers produce either comb or extracted honey exclusively. Those who run largely for extracted honey are likely to consider the production of comb

too fussy and particular, and something that it will not pay them to bother with. I have known extensive producers of comb honey who had no extractor, and others who used an extractor only rarely.

The extracted honey man has the more justification for confining himself to his specialty. In most cases it will not pay him to attempt to produce a small amount of comb honey.

Whether comb or extracted honey will prove the more profitable is a question that each must decide for himself, according to his local conditions. But even if he decides that it will pay him best to make comb honey his main crop, it is my opinion and firm conviction that he cannot afford to confine himself exclusively to that. There are three main reasons for this.

THE COMBINATION SYSTEM GETS THE BEES STARTED IN THE SUPERS EARLY IN THE SEASON.

The first is the fact that it is often difficult to induce the bees to begin work promptly at building comb and storing honey in the supers.

Upon this hinges much of our trouble with swarming, and not a little of our success or lack of it in getting a good crop of honey. Often a colony will do almost nothing for days when other colonies are storing rapidly, the only apparent difference being that the backward colony seems disinclined to make a start. Sometimes after they have once begun they will thereafter do well, but often their comparative idleness, at a time when honey is coming in freely, results in the contraction of the swarming fever. With a short honey flow these delays and hindrances result in a serious curtailment of the honey crop, often indeed, in an entire failure. The cramming of the brood chamber with honey is not the least of the evils, and with an old queen effectually spoils the chances of the colony doing well later. The man who has only a few colonies, and plenty of time to give to each individual case, can remedy these evils in various ways, but the aim of the apiarist who expects to make money at the business must be to accomplish results with as little manipulation as possible.

IT SECURES A SURPLUS EVEN FROM WEAK COLONIES.

The second argument against exclusive comb honey production is that a colony that is weak or only moderately strong in numbers cannot produce comb to the best advantage. That foundation principle of bee keeping, "keep all colonies

strong," applies with far greater force to colonies producing comb honey; for a colony that will do very fair work storing honey in combs already built, may do nothing whatever at building comb in a super. I have frequently heard bee keepers say, at the close of a very fair honey flow, that many of their colonies had not made an ounce of honey. This is sheer waste. There is something radically wrong with a colony, or its management, when a colony that has its combs in the brood chamber completed, and is beyond the nucleus stage, cannot be induced to store honey in combs in the super, if there is any to be gathered in the fields.

IT LESSENS THE NUMBER OF UNFINISHED SECTIONS.

My third reason for advocating the mixed system is the fact that ordinarily the close of the honey flow finds a great many sections on the hives only partially completed. These sections are seldom salable at any profitable price. To extract the honey from them is a tedious and somewhat unprofitable job, while the honey, being mostly unsealed and unripe, is not of very good quality. Moreover, careful observation for years has convinced me, that beyond a very limited number, that may perhaps be found profitable, a section that is filled with empty comb is simply a section spoiled.

Many, I know, will not agree with me here, but when we consider that honey stored in such sections will very seldom seldom grade higher than No. 2, worth in most markets two cents per pound less than No. 1, it should be evident that it would be more profitable to have this honey in the extracted form, or in a more salable and higher priced comb. A still stronger argument against the use of drawn combs in sections is that many times (almost always, when the honey flow is good) sections will be drawn, filled and completed, even sooner than the sections of drawn comb will be entirely finished.

All these drawbacks to be met in the exclusive production of comb honey are easily avoided or remedied by an intelligent combination of the two systems. Take notice that I say a combination of the two. The man who sets aside a portion of his apiary to be run for extracted honey throughout the season, while the other part is devoted to the production of comb, is not using a combination system. He is using both systems and using them independently, whereas, in a true combination system.

the advantages of the one are made to supplement the shortcomings of the other throughout the whole apiary and through the whole season.

At the beginning of the season all colonies that do not seem likely to begin work at once in the supers are given a set of extracting combs.

THE IMPORTANCE OF GETTING BEES STARTED IN SUPERS EARLY IN THE SEASON.

The bees will begin storing honey in these readily, thus forming the habit of storing in the supers *early*, which is very *important*. The ideal condition for a colony at the beginning of the honey flow would be to have every cell in the brood chamber full of either brood or honey, so that the very first gathered must, perforce be stored in the super. Since we cannot well secure this, it is well, as the next best thing, to get them started there as soon as possible. Bait combs are good in their way, but even a whole super full of drawn combs in sections is not as good as a super of nice extracting combs for this purpose. This super of extracting combs may be left on until it is completed, a super of sections being tiered under it as soon as it is well under way, but I prefer to remove it in most cases as it is about half full. I would rather leave it on, but the bees show such a preference for the combs that unless the honey flow is very heavy they will do little or nothing at the sections until the combs are completed.

There will always be some colonies that will not do good work in the sections, because they are not strong enough in numbers, because they are not good comb builders, or because they do not cap their honey nicely. The extracting combs may be tiered up on these to any desired height and left to be finished. If these colonies get into good comb honey condition before the end of the honey flow, the combs may be removed, extracted, and stored away until they are needed again. When a colony swarms, its comb supers should go with the swarm, while a set of extracting combs should be placed on the old colony. Any colony that at any time during the honey flow, is found to be doing poor work in the sections, should have those sections promptly removed and replaced with a set of extracting combs.

As the season draws to a close, instead of giving sections that may not be completed, give extracting combs to the colonies that are doing the poorest work in the sections, giving their sections to others to be completed.

In this way you not only secure a

larger amount of finished honey, but you avoid having a lot of unfinished sections to carry over until the next season, and which would much better be still in the crate in which they came from the factory. My article in August Review of last year goes into detail in some directions more than I have here.

Of course, a queen excluding honey board is a practical necessity on every hive that has one of these sets of extracting combs, but the advantages of this are so great and so many that I would not undertake to go without it, and every hive that contains a colony strong enough to store honey is supplied with one. I use the wood-zinc board, as no other form will keep the exact bee-spaces that are so necessary for rapid and convenient handling.

ADVANTAGES OF A SHALLOW EXTRACTING SUPER,

My extracting supers are six inches deep, just the same as the brood chambers, the only difference being that the space occupied by eight frames in the brood chamber is filled by seven in the upper. These frames have a projecting top bar resting in a rabbet at the top of the hive, but have close fitting end bars, pressed closely together by a screw through the side of the hive, as in the Heddon hive. This continual pressure keeps out the propolis, or if any gets in it is squeezed out so that accumulations cause no trouble.

These supers can be handled any side up about as safely as if they were so many blocks of solid wood. No frames are ever handled separately until they come to the extracting room, when the screws are loosened and the whole dumped out upside down. They are freed from bees by the use of a bee escape or by Rambler's jouncer, a valuable invention, though I had used the same principle for a long time. It will be seen that the change from one kind of a super to another requires very little time or handling.

Briefly, the advantages of the system are that you secure more honey, a higher grade of comb honey, save a great deal of waste, and do it with a control of the bees and an economy of labor that can be secured by no other method that I am familiar with.

This is not theory. I first gave this system to the public about fourteen years ago, and, for a longer time than that, it has been the plan on which my apiaries have been managed.

GRAND JUNCTION, Colo., Nov. 13, 1903.

Success Magazine

If you are reading none of the many most excellent magazines of the day, you are missing a great treat. Perhaps you regard them as luxuries. Possibly they are in some instances. They certainly help to fill out our lives and give us broader views. They are like windows that allow us to look out over the wide world. This life is not one wholly of dollars and cents—at least it ought not to be. Enjoyment, pure and simple, enjoyed just for the sake of the enjoyment, is desirable and beneficial. To many there are few things more enjoyable than the bright pages of a really good magazine; and, of the several that I read, I know of none more helpful than the Success Magazine; a 70-page monthly at \$1.00 a year, I have read it for years, and I know that a share of my enthusiasm, courage and perseverance have been gathered from its pages. A man's habitual frame of mind has much to do with his success, and the reading of Success will cheer, and inspire, and encourage, and arouse a man to successful efforts. I can offer the Review and Success one year for only \$1.75.

I will not make one cent on this offer but shall be happy in having helped my readers to secure some most excellent reading at a very low price.

W. Z. Hutchinson, Flint, Mich.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

PATENTS START FACTORIES

 We Secure Patents. **NO FEE IF WE FAIL.** Start right. Free book—How to obtain, finance and promote patents. Send sketch or model for free search FARNHAM & SUES, Pat. Attys., WASHINGTON, D. C.

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-1f

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of 5 to 7 cents per gallon. Process by mail \$1.00

C. W. Dayton, Chatsworth, Calif.



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-me hive, \$5.50.

DOOLITTLE "QUEEN-REARING" BOOK FREE TO FEBRUARY 1

With the AMERICAN BEE JOURNAL One Year---Both for \$1.00

READ THE FOLLOWING PARTICULARS

No doubt there are thousands of readers of The Review who would be glad to read the old AMERICAN BEE JOURNAL regularly if they once get started. In order to induce them to make this "start" we will send a copy of Doolittle's "Scientific Queen-Rearing" book with every new subscription order for one year (with \$1.00) received between now and February 1, 1911. The price of this book, bound in cloth, is \$1.00; but we will send a copy of the leatherette-bound book. All except the binding is the same in both books.)

The AMERICAN BEE JOURNAL is \$1.00 a year—a large 32-page monthly. Every bee keeper ought to have it; and in order to induce several thousands of readers of the Review to take it for 1911 we make the above generous offer. Now is your chance to get a copy of Doolittle's great "Queen-Rearing" book free. Better sit right down and send in your order with \$1.00 for the book and the AMERICAN BEE JOURNAL for 1911. Sample copy of the Bee Journal free. Address

GEORGE W. YORK & CO., 117 N. Jefferson St., CHICAGO, ILLINOIS

WHOLESALE

BEE SUPPLIES

RETAIL

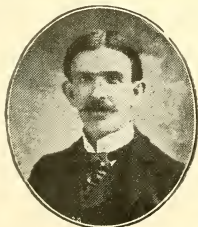
Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER MILK BOTTLES

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POWDER, Indianapolis, Ind.
859 Massachusetts Avenue.

"DADANT'S FOUNDATION"

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER'S FOUNDATION

and WORKING your WAX for you.

Write us for ESTIMATE on full LINE of SUPPLIES. It will pay you and costs nothing,
RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

D. Cooley can fill your orders with the
A. I. Root Company's

STANDARD BEE SUPPLIES

On short notice. Catalog free.

D. Cooley, Kendall, Mich.

ITALIAN BEES nd Queens and
standard goods. Ask for circular. Aliso Apiary,
El Toro, Calif. 2-10-11t

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 75 cents; tested, 90 cents; select tested, \$1.10; breeder, \$1.65. One-comb nucleus, no queen, 80c. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation.

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

5-10-1f

New Catalog Now Ready

Of Dovetailed Hives, Marshfield Sections, Dittmer's Foundation and all kinds of bee keeper's supplies at Reduced Prices, (car loads in stock). Also all kinds of Berry Baskets, Hallock Cups, Hallock Boxes and Crates to match.

Honey and Beeswax Wanted, Wax 30c.

W. D. SOPER, Jackson, Mich.

323-325 S. Park Ave.

1-11-8t

A Post-Card Projector

A year ago Santa Claus brought my eight-year grandson, Bruce Hanneman, what is called a post-card projector. By means of a powerful light, any bright picture the size of a postal may be greatly enlarged and thrown upon a screen. If you have a Youth's Companion premium list, you will find this projector illustrated and described, only the one that we have uses a 32-candle power electric light, instead of gas. This is a very interesting toy for children, but my grandson has played with his so much that he has tired of it, and he came to me and said: "Grandpa, couldn't we advertise this in the Review, and sell it, and then take the money and buy something else?" So I'm trying. It cost \$3.50 new, and is just as good now as the day it came, but we will sell it for only \$2.50. Shipping weight 4 lbs. Must go by express, and charges paid by receiver.

W. E. Hutchinson, Flint, Mich.



are our specialty. We furnish such extensive bee keepers as E. D. Townsend and others. Consider getting your bees into Protection Hives this fall. Give us list of goods wanted.

A. G. WOODMAN COMPANY

GRAND RAPIDS, MICHIGAN

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

CLUBBING LIST

Here is a list of some of the periodicals, together with prices, that I can furnish with the Review.

	Publisher's Price	With Review
18 American Agriculturist.....	\$1 00.....	\$1 90
15 American Bee Journal.....	1 00.....	1 75
15 American Boy.....	1 00.....	1 75
22 American Magazine.....	1 50.....	2 10
22 American Photography.....	1 50.....	2 10
15 Boy's Magazine.....	1 00.....	1 75
22 Breeder's Gazette.....	1 75.....	2 10
35 Buffalo Express (Weekly).....	2 00.....	2 75
18 Camera.....	1 00.....	1 90
72 Century Magazine.....	4 00.....	4 60
14 Chicago Inter Ocean and Farmer..	1 00.....	2 10
88 Colliers' Weekly.....	5 50.....	5 40
4 Com'ort.....	25.....	1 20
16 Cosmopolitan.....	1 00.....	1 80
22 Country Gentleman.....	1 50.....	2 10
62 Country Life in America.....	4 00.....	4 10
22 Everybody's Magazine.....	1 50.....	2 10
9 Farm and Fireside.....	50.....	1 45
18 Farmers' Review.....	1 00.....	1 90
5 Farm Journal (2 years).....	35.....	1 25
9 Farm Poultry.....	50.....	1 45
24 Good Health.....	1 50.....	2 20
20 Good Housekeeping.....	1 25.....	2 00
9 Green's Fruit Grower.....	50.....	1 45
22 Hampton's Magazine.....	1 50.....	2 10
68 Harper's Magazine.....	4 00.....	4 40
16 Health Culture.....	1 00.....	1 80
18 Hoard's Dairyman.....	1 00.....	1 90
18 Hunter, Trader, Trapper.....	1 00.....	1 90
32 Independent.....	3 00.....	2 60
25 Ladies' Home Journal.....	1 50.....	2 25
74 Leslie's Weekly.....	5 00.....	4 70
22 McClure's Magazine.....	1 50.....	2 10
19 Metropolitan Magazine.....	1 50.....	1 95
14 Michigan Farmer.....	75.....	1 70
19 Munsey's Magazine.....	1 00.....	1 95
28 New England Magazine.....	1 50.....	2 40
13 Ohio Farmer.....	75.....	1 65
18 Orange Judd Farmer.....	1 00.....	1 90
44 Outing Magazine.....	3 00.....	3 20
57 Outlook.....	3 00.....	3 85
20 Pearson's Magazine.....	1 50.....	2 00
25 Physical Culture.....	1 50.....	2 25
58 Popular Science Monthly.....	3 00.....	3 90
40 Recreation.....	3 00.....	3 00
9 Reliable Poultry Journal.....	50.....	1 45
40 Review of Reviews.....	3 00.....	3 00
25 Saturday Evening Post.....	1 50.....	2 25
54 Scientific American.....	3 00.....	3 70
55 Scribner's Magazine.....	3 00.....	3 75
29 Sports Afield.....	1 50.....	2 45
47 Suburban Life.....	3 00.....	3 35
15 Success Magazine.....	1 00.....	1 75
18 Wallace's Farmer.....	1 00.....	1 90
13 Wisconsin Agricultural.....	75.....	1 65
34 World's Work.....	3 00.....	2 70
22 Woman's Home Companion.....	1 50.....	2 10
30 Youth's Companion.....	1 75.....	2 50

To find the price for more than *one* paper, and the Review, add together the numbers *preceding* the papers wanted, multiply the result by 5, add \$1.00, and the sum will be the amount to send.

I can furnish any periodical published. If you don't find what you want in the above list, write me.

At these prices there is very little direct profit to me. It simply makes it easier to renew, and helps my readers to secure their reading matter at a lower price.

W. Z. Hutchinson, Flint, Mich.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 10 to 11c; beeswax, 30c.

Dec. 24 1910

BLAKE-LEE CO.
4 Chatham Row

NEW YORK CITY—The demand for comb honey has slackened off considerably during the past few weeks, and we do not expect any revival until after the holidays; while we are not over stocked on fancy white, we are heavily stocked up with buckwheat, mixed and off grades, all of which have not been in much demand this season. We quote fancy white at 15c; No. 1 at 14c; off grades at from 11 to 12c; dark, mixed and buckwheat at 10c. Extracted in good demand at unchanged prices. Beeswax quiet at from 29 to 30c.

Dec. 23, 1910

HILDRETH & SEGELKEN
82 Murray St.

CHICAGO—The market at present is quiet, as is usual with the end of December. The amount in dealers hands is not excessive. We quote as follows: Fancy white, 18c; No. 1 white, 16 to 17c; fancy amber, 13 to 15c; No. 1 amber, 11 to 12c; fancy dark, 10c; No. 1 dark, 7 to 9c; white extracted, 8 to 9c; amber, 7 to 8c. dark, 6 to 7c; beeswax, if clean, 32c.

Dec. 22, 1910

R. A. BURNETT & O.
199 S. Water St.

CINCINNATI—While the price on fancy comb honey is very firm, the demand is not as good as it was 60 days ago owing to the fact that the many bee-keepers bring in their little lots to the country stores which lessens the demand from the jobber. We are selling strictly fancy comb honey in 24 section cases, \$4.00 by the single case, and to the jobber at \$3.75. Amber and dark comb honey is not wanted at any price. Extracted honey is suffering to some extent in demand as it always does around the holidays. There is no reason for lowering the prices stated, it will not hasten the sales; we therefore quote amber honey in barrels, according to quantity and quality purchased, from 5½c to 7½c; fancy white in 60 lb. cans from 9c to 10c. We are paying for choice beeswax from 28c to 30c per lb. delivered here.

Nov. 21, 1910

THE FRED W. MUTH CO.

DENVER—As usual, near the holiday season, demand for honey slackens up. Prices are well maintained however, especially on first class extracted. Our jobbing quotations are as follows: No. 1 white, per case of 24 sections, \$3.60; No. 1, light amber, \$3.38; No. 2, \$3.15; extracted, white, 9c; light amber, 8 to 8½c; strained, 6½ to 7½c. We pay 25 to 26c per pound for clean, yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASS'N.

F. Rauchfuss, Mgr.

Denver, Colo.

Dec 26, 1910

KANSAS CITY—Twenty-four section case sells as follows: No. 1 White, \$3.50; No. 1 amber, \$3.25; No. 1 dark, \$2.50 to \$3.00; white extracted, 8 to 8½c. amber 7c; dark, 6c; beeswax, 25 to 28c.

Dec 23, 1910

C. C. CLEMONS & CO.
Kansas City Mo.

FOR SALE 100 hives bees in two story standard hives. \$5.00 per hive f. o. b. station. Box 545, San Antonio, Texas.

ROOT'S GOODS

For Western Pennsylvania. Liberal early order discounts. Gleanings and choice queens

GIVEN AWAY

Write at once for circular. Time is limited.

GEO. H. REA, Reynoldsville, Pa.
Successor to Rea Bee and Honey Company
11-1C-tf

THIS BRAND MEANS BEE SUPPLIES

SCIENTIFICALLY MADE
OUT OF

GOOD MATERIAL TAKE NO OTHER



**30 DISTRIBUTING HOUSES
SEND FOR FREE ANNUAL
1911 CATALOG**

GIVING NAME OF NEAREST ONE

G. B. LEWIS CO.
WATERTOWN, WIS.

Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How These Moving Pictures Were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds, so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will show a scheme for screening a honey house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M. will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee matter departments and other ordinary illustrated matter, all of which will make *Gleanings* for the coming year the brightest and best it has ever been.

Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet clover seed, *Melilotus Indica*, postpaid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires.**

To encourage old subscribers to secure new ones we will send a one pound package post paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

Yellow Sweet Clover (*Melilotus Indica*). What is it?

This we believe is a very remarkable honey plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and **we now have on hand something like a carload.** The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis* and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

Do Not Delay Ordering

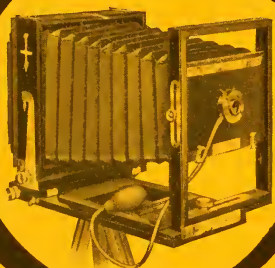
While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio

FEBRUARY, 1911



Flint, Michigan, \$1.00 a Year



Competitor View camera

A Moderate Priced
Instrument for
Interior or
Outdoor Use

The Distinct Advantages of the Competitor

Reversible Back—Both Horizontal and Vertical Swings in the Rear—The Back Focus is Operated by a Rack and Pinion, allowing any width of angle Lens to be used—Rising and Falling, as well as Sliding Front—The Front is wide enough to accommodate Stereoscopic Lenses—Two Tripod Plates for properly balancing the Instrument — Best Workmanship — Mahogany Finish.

To those desiring the Camera equipped with a Lens and Shutter, we offer some very attractive combinations guaranteed to please.

Many dealers carry Seneca product ; some do not, owing to the restrictions imposed by the Photographic Trust. If your dealer will not supply you with Price List, Lens Equipment, and other information. Write us.

Seneca Camera Mfg. Co.

Dept. R

ROCHESTER, N. Y.

Largest Independent Camera Makers in the World

Ye who are in need of Honey write to us for prices. Samples 10c.

We have the following fine honey to offer:

Extracted Honey

Orange Blossom
Sweet Clover
Florida Amber

In crates holding two 60-pound cans

Comb Honey

Strictly Fancy Comb Honey
Also Fine Comb Chunk Honey

The Fred W. Muth Co.

51 Walnut St.

"The Busy Bee Men"

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

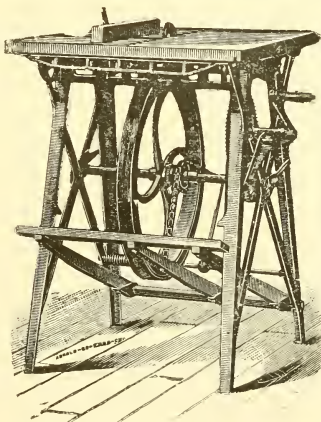
SAWS

in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

354 Ruby Street
Rockford, - Illinois



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

Let us hear from you, if
you want anything in the

BEE SUPPLY OR POULTRY SUPPLY LINE

Write for our
FREE CATALOGS

C. H. W. WEBER & CO.

2146 Central Ave.,
CINCINNATI, OHIO

"falcon"

**Bee Keepers' Supplies for
Michigan**

Falconer, N. Y., just south of Buffalo, directly opposite Detroit, is the location of the

"falcon"

factory. Quick time and low freight to bee keepers in the Detroit district. Chicago, Ill., 117 N. Jefferson. Branch under management of Geo. W. York, for all Central and Western as well as Northern Michigan points.

Write for "Red" Catalog.

W. T. Falconer Mfg. Co.

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CLUBBING OFFERS

Everybody knows about the Bingham smoker. The Conqueor size gives sufficient smoke, and is as good as a larger size, except that it needs filling a little oftener. The price, postpaid, is \$1.00, but I will send the Review one year and a Conqueor for only \$1.75.

Twentieth Century Smokers have a diameter of $3\frac{1}{2}$ inches, are 7 inches deep, have a double draft, double walls lined with asbestos, a hinged, one-piece cover, and the bellows is fastened on with ribbed steel brackets. The price, postage paid, is \$1.25, but I will send one with the Review one year, for only \$1.75.

Advanced Bee Culture is a beautiful book, delightfully written, neatly printed, lavishly illustrated and handsomely bound, but, of greater importance, the reading and heeding of its contents will put any practical bee keeper on the high road to success. A new edition will soon be out. It will be largely re-written and much new matter added. Price \$1.00, or the Review one year and the book for only \$1.90.

A good fountain pen is a great convenience, and the Parker certainly fills the bill. I have carried one for years, and I know. It does not leak and daub the fingers, while the "lucky curve" feature makes the point always inked, ready for business. The \$2.00 pen is exactly as good as any pen that is made; the higher priced pens simply having more fancy handles. For \$2.50 I'll send the Review one year and a \$2.00, Parker, gold fountain pen.

The Advanced Bee Veil is the most satisfactory veil that I have ever worn. It is not tucked inside the collar, but is fastened and held down firmly, by a cord, out on the shoulders, several inches from the neck, thus making it simply impossible for the bees to sting the neck through the veil, as is the case with an ordinary veil. Price of the veil is 60 cents, but I'll send the Review one year, and the veil, for only \$1.50.

In my estimation, few apicultural writers are the equal of E. D. Townsend of Michigan. He has had a long, wide and successful experience, and knows how to tell about it in that plain, simple, straight forward manner that is so easily understood. I was more than delighted when I learned that he had written a book on bee keeping. While it is especially for beginners, it has much of value in it for the veteran. The price of the book is 50 cts. or I will club it with the Review one year for \$1.35 for the Review and book.

W. Z. Hutchinson
Flint, Mich.

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Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying-press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.

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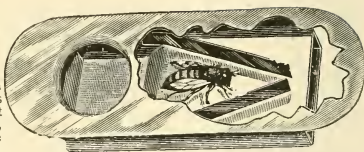


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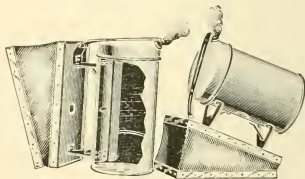
No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

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GOLD MEDALS

St. Louis Exposition 1904.
Jamestown Centennial 1907.



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

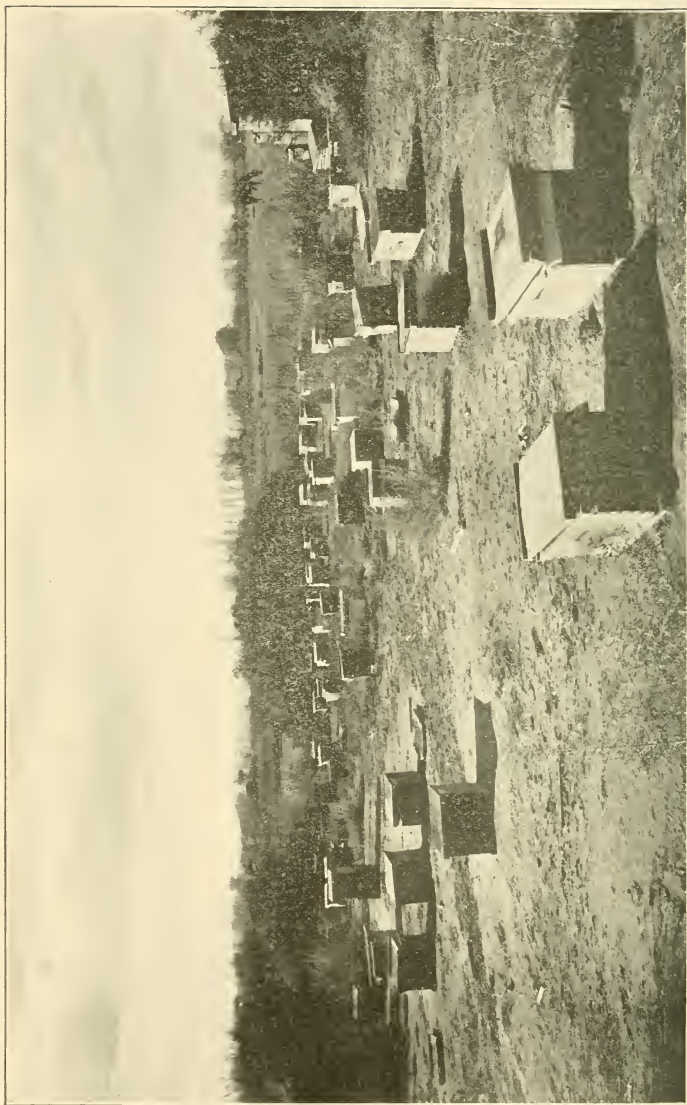
The cap is one piece—**can not clog**. It is the **Largest Smoker sold for a dollar**. **Guaranteed to suit or refund price**.

Price \$1.00; two \$1.60; by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2.00. We sell Danzenbaker hives and supers with metal **propolis shields** and anything in **bee supplies** at **factory prices**.

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Apiary of 200 Colonies at Fallon, Nevada
On the Truckee-Carson Irrigation Project

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIV.

FLINT, MICHIGAN, FEBRUARY 1, 1911.

NO. 2

How Irrigation in the Far West is Opening up New Fields for Bee Keepers.

C. J. BLANCHARD.

Of the U. S. Reclamation Service.

AMONG the numerous specialized industries which are taking root, and which promise a large measure of success on many of the irrigation projects of the Reclamation Service is the production of honey.

During a recent trip that I made covering nearly all of the reclamation projects, I, as the Statistician of the Reclamation Service at Washington, D. C., made an investigation of this industry. On a large number of projects the apiaries were only just being established. Those that had been in operation a year or more reported, almost without exception, an abundance of food for bees, favorable climatic conditions, and a very fine grade of honey, for which there was a good demand. The white sage honey was an especial favorite on the coast.

As the cultivated acreage increases on the projects, adding large areas of alfalfa and clover, orchards and small fruits, the food supply will take care of more bees. Development of agriculture of course promotes the growth of towns and villages, and creates a home market. In most sections the supply has not kept

up with the demand. By co-operation among apiarists to produce best grades, and to create new markets through intelligent advertising, bee culture will eventually become one of the most profitable industries in the desert country. As everything in the arid country tends towards specialization, the bee men must get together on a plan similar to that now in operation among fruit growers, establish high standards, and by rigid regulation insure the marketing under special label of only first class honey.

There is a wide field for the bee man in the West, and nearly all of the projects of the Government offer opportunities which are worthy of consideration.

WASHINGTON, D. C. Jan. 12, 1911.

[The frontispiece this month shows a characteristic Western apiary on one of the irrigation "projects" mentioned in the foregoing. By the way, I consider this picture one of the most beautiful photographs, the best taken, of any landscape view that I have ever seen. Note the beautiful clouds, the clear, perfect definition, and the picturesque point of view.—

EDITOR.]

Wintering, Springing, Feeding, Making Increase and Securing Surplus.

A. LAING.

I WISH to impose upon your good nature, and ask you a lot of questions in reference to your article on the Flint apiary as given in the December Review. Your success seems to me remarkable; 75 pounds of surplus honey per colony, spring count, with no super combs for honey, and 136 per cent. of increase, is one of the best reports I ever saw; and I am wondering if any good bee keeper could go and do likewise, providing he used good judgment and care. I have a cousin not far from here who increased one colony to three, and took 400 pounds of honey in the one season, but I had hardly thought it was possible in our climate to get such results as you speak of from a *whole* apiary.

I am now thoroughly convinced of the advisability of men who are experienced apiarists, and who are making a specialty of bees, going into the business extensively; consequently, I want more bees, and the question is which is the cheapest—well, there are several questions I would like answered in the Review.

SHALL WE RAISE BEES OR BUY THEM?

I have clover, and, by moving the bees, a small amount of basswood and buckwheat, now would it be cheaper for me to buy bees at \$5.00 per colony, or raise them as you did at Flint?

Was the season a good one at Flint or did other bee keepers have only a small crop?

Is your location at Flint, from the bee keepers' standpoint, good, average or poor, generally speaking?

From what source was the 3,000 pounds of honey gathered, principally?

EARLY FEEDING.

Where one has not the frames of honey for the early feeding, would not good syrup poured into the combs in the honey

house, and then two or three given to each colony, answer the purpose just as well as the combs of honey?

Were your hives 8- or 10-frame Langstroth?

In reference to packing on the sides, were you not bothered with the rain getting under the upper edge of the tarpaper, and soaking the packing, thus making it worse than no packing, as the sawdust would hold the moisture?

Do you believe that you could take 75 colonies in a fair clover location, and increase them to 175 colonies and take 7,500 pounds of honey, which would be equal to your work with the Flint 40?

THE SIDE-HILL CELLAR.

Would you describe your Flint bee cellar? I believe it would be possible to make a cellar in a sandy location for \$25, that would accommodate 200 colonies. If the sides were sloped a little, say two feet in a drop of six, I think they would not cave, and, if not, why use any lumber at all, except as a cover, and perhaps for a door. How do you control the temperature in your cellars that are many miles distant from your home? Unless the temperature can be kept almost stationary, either by the cellar being entirely under ground, or by automatic regulators, cellar wintering would not be practical, with scattered apiaries, as it would be impossible to visit each one with every change of temperature.

SIMCOE, Ont. Can., Jan. 2, 1911.

[Before proceeding to answer the above queries, I think I better introduce a letter from my friend Snyder of New York, and then reply to both correspondents at one time. Here is the Snyder letter:—EDITOR.]

KINGSTON, N. Y., Jan. 3, 1911.
Friend Hutchinsonson:

I am now reading your article in December Review for the third time. I



Snuggled in for the Winter.

Cellar at Flint, Mich., where nearly 100 colonies are wintering perfectly.

have reference to the article wherein you told us the story of last season; and I do think it is the very best report I ever read. I mean to say, you made the best show from those 40 colonies last season that I ever heard of; and it was done in such a manner that one could do the trick almost any season with nothing unreasonable about it.

You failed to tell us the cost of the tarred felt used in wrapping the hives, (how much per colony.)

TARRED FELT A FAILURE AS WINTER PROTECTION.

Two years ago we wrapped some 130 colonies in the fall with tarred paper after covering them with eight or ten thicknesses of common newspapers. and left them out on their summer stands all winter. Almost one-half died, and the

with telescope cap over all, which will keep all water from injuring anything.

I believe spring protection is the best thing out for cellar-wintered bees.

Wife says come to supper, so here goes.

AARON SNYDER.

[Let's begin with the cellar. It is practically under ground, and not influenced by the outside temperature. I believe it is well-nigh impossible to winter bees successfully in a cellar above ground, or even partly exposed. Put the cellar under ground, and week after week may pass with scarcely a degree of variation in the temperature. We usually visit our cellars once in two or three weeks, as often as once a month at



Another View of Cellar Taken from the up-hill Side.

The door standing open in the gable end allows one to enter the cellar by going down through the ventilating opening.

others were weak. I believe they were covered too tight, were too warm—'twas too much of a good thing. We have a few (10) wrapped with roofing paper, now, about as you wrapped yours, with leaves for packing, instead of sawdust, as you did, with two inches of leaves on top of the $\frac{3}{4}$ -board over brood frames

the least, and ventilate according to the temperature as we find it. There are two doors, an outside and an inside door. When we first put in the bees we usually close only the outside door. There is a yard-square opening in the ceiling, and

this is left open full width at first. As the season advances, if we find the temperature dropping we first close the inside door. As the weather becomes still colder we may have to partly close the

posts. A chamber floor is nailed to the lower edges of the joists, 18 inches of sawdust or planer shavings spread over the floor, and a double-boarded roof, with tarred felt between, put on over all.



Interior View of Cellar

This cut was made from a flashlight photograph.

ventilating opening. By this management we have always held the temperature between 42 and 45 degrees.

DETAILS OF CELLAR CONSTRUCTION.

If the walls of a cellar were made sufficiently sloping, I expect that they would stand up without any support, such as boards, brick or cement, but, if the walls were sloped enough to make it safe, it would greatly increase the size of the top of the cellar, thus necessitating a much larger roof, which might increase the cost nearly enough to pay for a support for the walls. We set a row of cedar posts, three feet apart, around the outside edge of the cellar. Two by six joists are spiked to the upper ends of the posts, the upper edges of the joists being even with the tops of the

The moisture from the bees rises up through the ventilator into this chamber under the roof, and passes out through the cracks, or congeals against the boards. If we should ever wish to put cement walls into the cellar, we have only to board up *inside* the posts, and fill the space thus formed with cement.

THE USE AND MISUSE OF TARRED FELT.

The tarred felt cost about five cents per colony. I have no use for tarred felt as a *winter* protection. The reports of success with this material have been very few—the failures many. Failures have also been reported when used *alone* as spring-protection. The reason given is that the black color absorbs the heat of the sun's rays, warming up the hive sufficiently to cause the bees to fly in

unsuitable weather. If using paper *alone* for spring-protection I would use a light colored building paper. By using two or three inches of sawdust between the outer covering and the hive, the heat was *modified*. Perhaps it was *hours* before the packing was warmed through, and probably as many more hours before it cooled off after the sun was gone. The great object of the protection was to retain the internal heat. In a long continued rain, a little water would run down inside the felt, but not enough to dampen the sawdust materially. Besides, this is not so important a matter in the spring as in the winter.

Very early in the spring, when a colony must remain clustered most of the time, nothing fills the bill for feeding, equal to a solid comb of sealed honey placed against one side of the cluster. After the weather is warm enough for the bees to fly nearly every day, the character and manner of the feeding is not so important. I think the giving of liquid feed has a greater stimulating effect than that of combs of honey, and the filling of combs with syrup as suggested by Mr. Laing has no objection except the work of making the syrup, filling the combs and putting them in the hives. There is more work, and more messiness, about it than making a syrup with cold water and pouring it into the feeders with no opening of the hives or disturbing of the bees.

My hives are the ten-frame Langstroth. This location is a good fruit and clover district, but there is nothing else that furnishes honey. When white clover

is done, the season is over. The flow from clover last season was nothing extra; just a fair, ordinary season. The trouble was that the bee keeper and his colonies *were not ready for it when it came*. Colonies left to shift for themselves did not average more than one-fourth as much in surplus or increase, as I secured; and I can see no reason why I might not take 75 colonies and do just as well, in proportion to the numbers, as I did with the 40. Certainly, there is no reason, unless it is that of overstocking, and it is my opinion, that 75 colonies, spring count, would not overstock this locality. Mr. R. F. Holtermann writes me that he approves of my management last spring, except that he would have kept the working forces together—would not have divided the colonies. Neither would I, had I been working for honey alone, but I wanted some increase. In fact, I had planned to increase the 40 colonies to 150, and get whatever surplus came in after I had increased to that number; but I was taken sick, and the plan had to be abandoned—the work turned over to whomsoever I could pick up.

Yes, increase was made at a profit, if a colony is worth \$5.00. It figures out about as follows: Hive, \$1.00; queen (purchased) 75 cts.; feed, 75 cts.; foundation, 50 cts.; total, \$3.00. To the 40 colonies, and their increase, I fed about \$40 worth of sugar. Even if no increase had been made, some sugar feeding would have been necessary so I think that 75 cts. for each new colony is a fair estimate for feed.—EDITOR REVIEW.]



Judicious Feeding Helped to Make \$4,000 in one Year. Overstocking not Feared.

FRANK COVERDALE.

FRIEND Hutchinson:—You ask which year brought me the most money from bees. Well, I have brushed the dust off my past records,

and find that my best season was 1903—350 colonies stored 32,000 pounds of comb honey, which sold at 12½ cts.; bringing in \$4,000.

There was fine weather that year, and both clover and heartsease yielded abundantly. I have had, and expect to have, similar seasons. 1908 was nearly as good. 1910 was the same kind of a season. A series of years brings about certain similar results; and I have no reason to believe that my location will ever be any poorer. In fact, I expect it to improve, as several large fields of sweet clover are being sowed near here. I have 100 acres of sweet clover myself.

THE IMPORTANCE OF FEEDING AT CRITICAL TIMES.

You ask if my crop of 1903 might not have been equaled in other years by feeding judiciously at critical times. Perhaps so, in some seasons; in others spring feeding would have been worse than useless. About fifteen years ago the bees were in poor condition when clover bloomed. To make matters worse clover did not furnish any honey. Between clover and the fall flow I fed \$80.00 worth of sugar, and secured \$800.00 worth of fall honey, besides putting the bees in excellent trim for the next year, which proved to be a most excellent year. If I had fed early that year, and built the bees up strong for the clover flow (which didn't come) it would have been a mistake, as I would simply have had a great horde of workers to board all summer. There is no one thing about bee keeping that pays better than feeding, *if it is done at the right time*. By this I mean, to feed at the right time to bring on an army of workers just at the opening of the harvest. As seasons differ so greatly, this matter calls for a careful study and constant watchfulness. However, as clover usually furnishes a crop at least three years out of four, it is good policy, as a rule, to get ready for the clover flow every year. I think I have never yet fed too much in getting ready for clover.

THE IMPORTANCE OF CONSTANT WATCHFULNESS AND FORESIGHT.

In my 36 years of experience I have learned that much may be gained by

keeping close watch of the present conditions that may affect the coming season. For instance, 1910 was dry in the summer. Very little clover started from the seed and lived until fall; but the old, established plants were plentiful, and September rains enabled these old plants to make a fine growth. Now, if the present winter is favorable for these plants, I shall get ready for it. If it freezes up dry and hard without much snow, these old plants will fare badly, and I shall go a little slow in spring feeding. In 1909 there was a nice growth of young plants, and a heavy fall of snow protected them perfectly until March; and, had the bees been booming and strong June 1st, the season of 1910 would have surpassed all others. It is usually warm enough between fruit bloom and clover to build up colonies by judicious feeding, but last year, the weather was too cool for this without employing outer protection. There are times when it pays *big* to look after the bees. To sum up the whole matter I will say that many seasons that bring only meager results, *might* have been made *good* seasons by simply a little judicious feeding at the right time.

ENCOURAGEMENT FOR THE EXTENSIVE BEE KEEPER.

You say that you left one yard of bees where there was a scant pasture of willow herb, yet they did nearly as well as where the pasture was more profuse; and that you believe that the capacity of many locations is under-estimated. In my home-apiary, in 1910, I kept 214 colonies, where I thought 100 were a great plenty, yet, to my surprise, the yield per colony was as great as when I had only 100 colonies in that yard—in fact, the home-yard out did, per colony, the yield of an apiary where I had only 100 colonies. I have studied over this matter a great deal, and I have about decided that if I had as many as 300 colonies in the home-yard, I would make still more money. At Maquoketa there are 500 colonies in five apiaries, all

located inside of one square mile, and run for comb honey, and these bees have often equaled, yes, surpassed my yields. If these 500 colonies were all gathered into one yard, and put in charge of one good bee keeper, would they be good

money makers? *Yes sir!* I have been watching that mile of bees for some time, and when it beats my four apiaries that are widely scattered, it sets me to thinking.

DELMAR, Iowa, Dec. 16, 1910.



Help from a Committee on Prices. Don't Consign; and Don't Cut Prices; but Advertise.

O. L. HERSHISER.



LAST year a dealer wrote a producer of honey in Canada, asking for a quotation on his fancy honey. A price was named which was the same as advised by the crop committee of the

Ontario bee keepers' association. (That such price was reasonable is evidenced by the fact that practically all of Ontario's crop of honey went out of the producers' hands before the first of January, at the prices recommended by the committee.) The dealer replied that he thought that figure too high and offered 1½ cts. less, with the promise that if he had to pay others more he would do the same by the producer in question. This producer, being a little wise to the ways of dealers, declined the bait. He rightly reasoned that a dealer with a large list of producers would write the same sort of letter to each, and would place himself under no obligation to pay more than the lowest price offered, as out of a large number of producers, he would succeed in purchasing of at least a few at his own figures.

It is no trouble for Canadian bee keepers to sell their honey at committee's prices.

And, by the way, this crop committee

of the Ontario bee keepers' association is one of the best things that ever happened to Canadian bee keepers. This committee meets immediately after the white honey harvest, and after considering the reports of the amount and quality of the crop, as furnished by members of the association; the condition of the times, whether good or bad; the fruit crop as it may influence the price of honey; the condition of the farmers, whether their crops are abundant and the prices obtainable; the condition of the laboring classes, whether well employed or otherwise;—after taking all these and any other influences into consideration, the committee advises the members of the association what the price of white honey ought to be. A later meeting of the committee is held to deal with the crop of buckwheat honey, at which time the first report may be revised if it seems best so to do. Ontario bee keepers are thus advised of the true value of their honey, and dealers are gradually gaining respect for the committee's recommendations. Instead of so much quibbling over prices, they are purchasing at producers' quotations, well knowing that nearly every large bee keeper has the same story to tell as to the price of honey. The dealer is learning that the honey producer has reliable sources of information as to the crop, and thus business is transacted without so much "off side play;" and that old game of "bluff" is on the rapid decline, so far as Canadian

bee keepers are concerned. Of course there are still a few bee keepers in the province of Ontario, who are not members of the Ontario association, and are not informed of the committee's advices as to prices. These still furnish good picking for the middlemen, but the number of these is steadily decreasing as the good offices of the association are becoming better known.

Canadians are to be heartily congratulated for having succeeded in raising the price of honey nearly, if not quite, 50 per cent. in the last few years, and in maintaining some semblance of its ratio of value to that of other commodities.

DON'T CONSIGN HONEY TO BE SOLD ON COMMISSION.

It seems to me to be a mistake to consign honey to be sold on commission, except in exceptional cases, such as where the selling price is determined by the owner of the goods. To consign goods to a merchant of whose financial standing and honesty you know nothing, is sheer folly. The only interest a commission merchant can honestly have in goods consigned to him is a certain percentage of the selling price. It would seem that his interests would stimulate him to get the highest price possible to obtain, but it does not always work out that way. Many merchants are none too flush with money, and the temptation is often strong to cut prices in order to realize the commissions, even if of less amount. I believe it to be true that honey sold on commission will seldom yield as large returns as when it is sold out right. When receiving quotations from commission merchants, just remember that the experience of many has taught that seldom have goods sold at the prices quoted; that usually a small portion is accounted for at quoted prices and the balance at a way below; that a complaint that goods have been damaged in transit, is frequently made without foundation, by the commission merchant, as a blind to account for their being sacrificed; that complaints that goods

are lacking in quality are likely to be made, usually without foundation; that when the commission and other charges are taken out, disappointment will be felt because the rich returns are away below the market quotation.

Don't consign to a middleman without knowing of his standing from reliable sources, and remember that the commission merchant's anxiety to sell and realize his commission quickly, is usually greater than the inducement to hold for the best market conditions.

Suppose the commission merchant has 1,000 pounds of honey that will bring 9 cts. per pound, if not forced to sale. The merchant's commission would then, at 10 per cent., be \$9.00. But, if he wishes to realize without delay, he might get an offer of 8 cts., and his commission would then be \$8.00; only \$1.00 less, while the consignor of the goods would lose \$9.00.

If a commission merchant is well stocked up with honey, and needs the money, he has a ready means of raising it by making a cut in the price.

HOW THE FARMER BEE KEEPER INJURES THE MARKET.

The small producer who has a few colonies of bees, kept as a side-line to some other business, is frequently more or less of a menace to the markets. He usually knows nothing of the cost of production, or whether his bees pay him for the trouble. He knows still less of the market value of honey, and considers whatever he gets for it as so much clear gain. The influence of this class of bee keepers is exaggerated, because, if the groceryman is able to purchase of him for a "song," he is prone to quote and insist upon that same starvation price to other producers who proceed with their apicultural operations on business principles. This farmer-bee-keeper goes to town with a small quantity of honey along with his butter, eggs, potatoes and beans, and sells for "any old price" the store keeper chances to name, which is usually just about

enough to be *something*. Thereafter, the specialist with nicely prepared honey is met with the same quotation. If the specialist is wise, however, he will not be influenced by it. If he will but "bide a wee" the small side-line producers' output will be out of the way, and better prices will be obtainable.

CARRYING OVER HONEY IN YEARS OF PLENTY.

In years of bountiful crop it may be necessary to carry over a part of the honey in order to sustain prices. It is far better to do this than to sell at a sacrifice, and thus contribute to the ruination of the market. It is an easy matter to sell honey at less than its value, but once it is *down*, it is a hard matter to get the price back to a normal level. Specialists have made snug little sums of money by standing firm for fair prices, and refusing to sell until the price was restored to the point of yielding a profit. It is not so easy to carry over comb honey, but it *can* be done. With extracted honey there is no difficulty. So I would say to the specialist: Make a fair price on your honey and stick to it, and do not be influenced by the ignorant and thoughtless bee keeper, or the dealer or merchant who seem to ready to exploit the bee keeper.

THE FOLLY OF CUTTING PRICES.

It is particularly aggravating to the bee keeper who has spent much time and been to expense in building up a market for honey at a fair price, to have other bee keepers come in and supply these customers at a reduced price. It would seem that self interest would prompt them to sell at established prices, rather than inflict self-injury by cutting out a part of the profits that are legitimately theirs. I suppose they do this because they lack ambition, are poor salesmen, and find it easier to sell at cut prices to customers that others have made than to make a market of their own at established rates.

Looking at this whole subject in its broadest aspect it seems to me that prices of honey are low and lacking in

stability because of a lack of knowledge of actual conditions that influence the market, by a great mass of bee keepers. What is needed more than anything else is reliable knowledge and unselfish advice as to the supply and demand, crop prospects and market conditions generally, and the prices that ought to be obtainable, in view of the crop and conditions. Bee periodicals could do a great and profitable service to their subscribers by keeping them publicly and correctly advised. Bee keepers should respect such advice and they can be assured in advance that if they do they will receive better prices. Such has been the experience in Canada. This is a branch of work that our association also might profitably take up. Another recommendation is that bee keepers make a more *earnest* effort to find a good market for their honey.

HELP THAT MAY COME FROM ADVERTISING.

They may be unable to do this in their immediate neighborhood. They cannot all sell direct to the groceryman or supply the family trade in their own neighborhood. Some honey producers there are who live remote from markets, and in localities so sparsely inhabited as to consume but little of their product. But that is not necessarily a bar to getting good prices. A superior quality of honey is almost always in demand, and the advertising columns of the bee journals and other publications are available to the producer wherever situated. You who have been selling finest extracted honey at less than 8 cts., just try advertising and I believe you will be satisfied with the result.

In conclusion, fellow bee keepers, remember that, in comparison with the price of other commodities you have to purchase, your fancy extracted honey is worth away above 8 cts. per pound, and your fancy comb honey away above 14 cts. Remember that a little money spent in advertising is likely, yes, almost certain, to yield you handsome profits on the investment, and in the end you w

have more money for your honey, after having paid for your advertising. That advertising is profitable is shown by the fact that nearly every successful business house advertises extensively. Bring up the matter of getting more money for your honey at your bee keepers' associations. It is a subject that touches your pocket book, than which there is none

more interesting. You, Mr. Editor, keep this subject agitated. It is good for your subscribers, and hence good for you. Open a honey column in the Review, in which the users and producers of honey may be brought together by means of "want" and "for sale" ads.

KENMORE, N. Y., June 6th, 1910.



The Difference Between Swarm-Control and Swarm-Prevention.

J. E. HAND.



Friend Hutchinson: Your remarks at the close of my article, which you copied on page 375 of December Review, would seem to indicate that I have not succeeded in mak-

ing myself understood in the description of my system of swarm-control. In order to receive a correct impression concerning a method or system that is being described, it is important that we have a correct knowledge of the terms that are used to designate them. While the terms "swarm-control" and "swarm-prevention" are scarcely distinguishable by the average bee keeper, yet they have a separate and distinct meaning. Even the editors of some of the leading bee journals have fallen into the error of considering the terms synonymous. Swarm-control is different from swarm-prevention, in that the former does not prevent swarming; it forestalls the event by substituting the artificial for the natural swarm. Thus, by working in harmony with the instinct of bees, we pay tribute to the demands of Nature; the swarm-

ing instinct is satisfied, swarming is controlled; and our bees are placed in that highly desirable psychological condition, without which it is impossible to secure best results in honey production; a condition which cannot be produced by shaking, brushing, or otherwise unduly disturbing them.

While many have laid claim to swarm-prevention, such claims have invariably been invalidated for want of evidence to sustain them. I do not wish to be understood as saying that swarming cannot be prevented; the idea that I wish to convey in this connection is that, in order to accomplish it the colony is thrown so far from a normal condition as to render it practically unproductive during an ordinary honey flow; therefore, as a rule, it is neither practical nor profitable, to attempt to entirely prevent swarming.

Perfect control of bees in its broadest sense, can be attained only by applying correct principles in harmony with the God-given instinct of bees. Its usefulness is by no means limited to swarm-control. Its principles are so intimately connected, as well as closely entwined around every necessary manipulation with bees, as to eliminate all unnecessary labor.

Your statement that the basic principle underlying my system is identical with

that of the Langdon system that had its day of disappointment and doom some 17 years ago, is literally true, but you seem to have overlooked the fact that the difference between the two methods of *applying that principle* is so wide as to admit of no comparison.

The fact that the Langdon system was intended to *prevent* instead of control swarming was sufficient reason for its failure. It is not a difficult matter for one who has made a special study of the principles that accelerate or retard swarming, to point out the factors that were directly responsible for the downfall of that system. The one fact that its principles were applied in direct opposition to the laws that govern the successful control of bees, was sufficient to seal its death warrant. A system that would double the working force of an already strong colony at swarming-time, without the application of principles that would satisfy the swarming-instinct, could only result in failure, the promiscuous intermingling of adult bees from strange colonies at swarming time would also have a tendency to defeat the plans of swarm-control. Furthermore, a system that would necessitate the closing of the entrance of a strong colony of bees at swarming-time is not worthy of further consideration from intelligent bee keepers. Such a practice, if it did not result in the loss of the colony from suffocation, would certainly cause sufficient injury to render it practically unproductive during the remainder of the harvest. Again, a system that would compel bees to travel 20 inches through a tube, only to find an entrance guarded by strange bees, who, if not in open hostility, would certainly regard them as unwelcome intruders, can have no part in solving the problem of perfect *control* of bees

That the Hand system has nothing in common with such methods should be apparent to all who will take the time to acquaint themselves with its principles as well as with the methods of applying

them. The secret of the success of this system lies with the habits of bees, coupled with a faithful observance of the principles that minimize labor.

While this is virtually a system of swarm-control by substituting the artificial for the natural swarm, two colonies *may* be worked together, if desired, without violating the principles that govern the successful control of bees. While we prefer strong colonies at the beginning of the harvest, working them singly, all colonies are not strong at this time, in which case we unite two medium colonies by placing one on top of the other, separated by a queen-excluding honey-board, this being done before the main harvest so that there will be no intermingling of strange bees when they are shifted over into the empty hive containing a frame of brood and the queen from the top colony. Ten days after making the first shift, another shift is made in the same direction by throwing the switch on the *back* side, thus reinforcing the swarm with an influx of bees.

Subsequent operations will depend upon whether or not increase is desired; if not, a specially constructed bee-escape is pushed into the entrance of the depleted colony, back of the switch lever, which will discharge the bees in close proximity to the main entrance into which they must enter, since no bee can again enter the original hive.

A noticeable feature of the equipment is that the appearance and position of the main entrances remain unchanged and are always open full width. After the second shift in the same direction, the strong colony will have an entrance at *each end*, and, if desired, one on the side. Furthermore, the side-entrances may be used as safety valves against the possibility of weakening a colony so as to cause the loss of unsealed brood. The fact that there is only one entrance on a side, centrally located, precludes the possibility of the mixing of bees. It should further be understood that there is absolutely no "trading" of bees during the process of shifting.

While we do not, as a rule, advise the shifting of bees into a hive already containing a colony, yet, by the method of placing one colony on top of the other, as previously mentioned, and shifting the bees over into the top hive after placing it down upon the vacant side of the switch board, we have never yet known a colony so treated to cast a swarm; however, it may not work in all locations.

There are many ways in which the new principle may be applied to the successful control of bees. While the *principle* is equally effective in all locations, the *method* of applying it must be governed by the location, time and duration of the honey flow.

Every well informed bee keeper can testify to the truth of the assertion that the shook-swarmling system is the only one that has ever amounted to anything by way of swarm-control; the objection to it in the past has been the labor that is required to operate it. Besides, there is no convenient method of holding the brood in reserve to reinforce the swarm which is perceptibly weakened in the midst of the harvest by the dropping off of old bees with no young ones to fill up the depleted ranks. The new system accomplishes all that shook-swarmling does, with the added advantage of a continuous influx of young bees, by which the swarm is continually increasing in numerical strength. Add to this the fact that the arduous labor of lifting heavy hives, shaking and brushing bees, etc., is entirely eliminated, and we can

better realize what the new system means to bee keeping, but it is only by *actual use* that we can fully comprehend its possibilities along the line of controlling bees and minimizing labor, which are the two crying needs of apiculture, as well as the most important factors in the cost of honey production.

I am aware that many will attempt to make the equipment from the description, without a sample to work from, and, doubtless, will condemn the system, when the fault will be improper construction. In order to obviate this nuisance, the inventor has thought best to protect it by patents, furnishing the equipment to the public through his regular authorized agents.

In conclusion, I invite honest criticism, and would be especially pleased to have experienced bee keepers name the weak points of the system as they see them. A system that will not bear the closest scrutiny is not worthy of a place in the ranks of modern bee keeping methods. My advice to all is, go slow, prove all things and hold fast that which is good.

BIRMINGHAM, Ohio, Jan. 9, 1911.

[It is with pleasure that I make room for the foregoing, as it is evident that, while the *principle* of the Langdon and Hand devices is identical, the *system of management* by the latter is *distinctly different*. In one sense, it is "shook-swarmling," but the device enables the bee keeper to compel the bees to "shake themselves," so speak.—EDITOR.]



EDITORIAL

May your joys be deep as the ocean;
Your sorrows as light as the foam.

Bro. York has extended the time to March 1st of his offer of Doolittle's Scientific Queen Rearing free with the Bee Journal. See his ad on page 61.

The Ohio State Bee Keepers' Association meets in convention February 16 and 17, at the Grand Hotel, 4th St. and Central Ave., Cincinnati, Ohio, Halls No. 1 and No. 2. Mr. N. E. Shaw, chief inspector of bees of State Department of Agriculture will address the convention

on the "Foul Brood Situation in Ohio." All bee keepers should attend. Elaborate arrangements are being made to make this the largest assembly of bee keepers at any one place.

The Men who have achieved success are the men who have worked, read and thought more than was absolutely necessary; who have not been content with knowledge sufficient for the present need, but have sought additional knowledge, and stowed it away for the emergency reserve.—C. K. Davis.

There are people who have a wishbone where the backbone ought to be, who luke-warmly wish for success but are not willing to pay the price of the effort to attain it.

Cellar Walls of brick laid up loose and dry (no mortar) below the frost line, are suggested by Mrs. F. H. Cyrenius of New York, as a means of securing the influence of the earth as far as possible.

Wintering bees in a cellar with cement walls and cement bottom has sometimes proved disastrous, and the cellar has been blamed for the loss—"bottled bees" it has been called. If any of my readers have been successful in wintering bees in large numbers in such a cellar, will they please tell us about it?

A Bee Journal without a good list of subscribers who have for it a feeling of friendship has little chance for success. Under the eyes of the editor passes a constant stream of letters full of hints, suggestions, criticisms and information, which enables him to give to his journal a freshness and sparkle otherwise unattainable.

Lime, in being air-slacked, does not give off oxygen, as suggested by Mr. Messenger in the December Review—at least, so says one of the Professors in Cornell University. These are the words used: "When lime is slacked in damp

air, part of it, by taking up water, becomes calcium hydrate, and part of it, by taking up carbon dioxide, becomes calcium carbonate. In neither case is any oxygen given off."

"How to do Things."

I am receiving quite a number of letters in response to my request for suggestions in regard to how the Review might be improved. After all is said and done, the majority prefers articles that tell "how to do things." If you can write an article telling how to do something *new*, or how to do something old in a *better* way, send it along—a warm welcome and a check in payment awaits its coming.

Too Many Departments in the Review Would be Suicidal.

Some are asking for an index, some for a query department, others for a department for beginners, and some others would have a health department, also one devoted to photography. *My gracious, chillu'n!* Do you realize how big, or, rather, how *little*, the Review is? First and foremost, the Review is a bee journal. It tries to tell its readers how to raise more honey at a less cost, and to sell it at a higher price, and, if it is to fulfill its mission it must not wander far from a well-defined path. It may be permissible, occasionally, to touch lightly upon these neighboring topics, but the main object, successful bee keeping, must never be encroached upon seriously.

Articles from Men who have Made Big Money in Bees.

Beginning with this issue, the Review will give a series of articles from men who have made over \$2,000 in a year from bees—some of them as high as \$5,000. Each writer will give a history of the year in which he made the most money out of bees, giving all of the conditions, factors and methods that enabled him to secure such a wonderful crop; also telling if there are reasons why

similar results may not be obtained in the future. If you have the courage to branch out, there is no reason why you need not do as well as these men—you will have their experience as a guide.

The Wisconsin State Bee Keepers' Convention will be held Feb. 23 and 24 at the Court House in Madison, Wisconsin. \$10 cash premiums—\$5.00, \$3.00, \$2.00 for three best five-minute papers of valuable information for Wisconsin bee keeping. N. E. France will be there and display his steam-heated uncapping knife, that for two cents a day, for oil, did the work of two men in former years. He will also display Mr. Cyrenius' double bee brush that, at a single stroke, frees all the bees from a full-size comb. He will also exhibit a new measuring honey faucet, to weigh any amount of honey; a hive cover 15 x 24, that can be made for 8 cents each in material,—will not warp, leak, rust or decay. The wind does not blow it off, nor will ants or bee moths cut holes in it. Secretary, Gus Dittmer, now in Los Angeles, will also be with us, and give a description of California as a honey country. President, J. Huffman, will have report as delegate to Albany, N. Y. convention.

GUS DITTMER, Sec'y.

Attention, Michigan Bee Keepers!

At Grand Rapids, last November, at our State meeting, a legislative committee was appointed to draft a new bill in regard to bee diseases in Michigan, and introduce it during the present term of the legislature, now in session. At this date, Jan. 9th, a proposed law is nearly ready to introduce, and is along the line of the one proposed by Dr. Phillips of the apiarian department at Washington. We are asking for considerable more money and the privilege of appointing several inspectors, instead of one, as our present law provides. There are only two or three months of the year when it is of much use to inspect bees for disease, and one man can do little in this

limited time. We ought to start *ten* men out next spring, and *will*, providing we can get this law passed. Hon. Geo. E. Hilton, who is our representative will go to Lansing this month, (January) and introduce this bill. Now, the object of writing this letter, is to ask every Michigan bee keeper to write *both* his representatives, now in Lansing, to lend their support to this bill.

If this is not done, *w* may as well do *nothing*, for, already Governor Osborn has sent a message to the legislature advising economy in all branches of the legislature and it will be a hard pull at best, to get this bill through. We are depending upon *you*, and *you* alone, brother bee keeper of Michigan, to get this measure through for it will be *hopeless*, unless every one of us lends a helping hand and keep "dinging" at our representative, until he just *has* to vote for this bill to get rid of us. Let us all *remember our duty*.

Fraternally yours,

E. D. TOWNSEND.

Shall the Review have a Monthly Index?

Several times, when I have asked for suggestions as to how the Review might be improved, some one has asked that there be a list of "contents" published in each issue. When a copy of the Review is received, it seems as though no index is needed. Each issue is not so very voluminous, and the number of articles or items is not so great; besides, I suppose it is usually read from cover to cover. At the end of the year an index is printed covering the whole year, which would render the monthly index of no value. The only time that I can see when a monthly list of contents would be of value is when, some time during the year, a reader wishes to find an article in some back number of that year. In this instance, the list of contents of each issue could be looked over sooner than all of the articles could be examined.

Now I have no interest in the matter, except to please my readers. If the

majority desires the index it shall be forthcoming. Remember, however, that it will occupy some space, and will curtail the reading matter, each month, just that much. Let each one who is interested, drop me a postal expressing a choice, either for or against, and we will see which side has a majority.



The Great Lack is the Courage.

I think one reason why more bee keepers don't keep more bees is because they don't *dare* to do it. They are afraid to make the start—fear they may not succeed, may fail to make a living. It may cause a smile, but let me say that I believe the hardest part of keeping more bees is to first make the resolve to do so. Let a man resolve in his own mind that: "In five years I will own 500 colonies," let him print it in big letters on a board and nail it up over his door, and the deed is the same as done. If a man sets out to own 500 colonies in five years, he can do it if his will power is strong enough. You little realize what you can accomplish once you have stuck your stake, and are determined to reach the goal.

I have been having a lot of correspondence this winter with men who have made notable successes in bee keeping, that is; been very successfully financially, and, without exception, they have kept bees in large numbers. It can't well be otherwise. Not much money can be made from a limited number of colonies.

Fortunately, bees may be increased very rapidly. In an exceptionally good season I once increased three colonies to 33. In an ordinary season I have increased 20 colonies to 100. Suppose, however, that a man only doubles his colonies each year, and begins with 20 colonies, in five years he would have 640 colonies. This would allow a loss of 140 colonies, and still leave the owner with 500 colonies. Doubling the number of colonies each year, is a very low esti-

mate for increase, and would allow of securing some surplus; at least enough to pay for the hives and foundation needed for the increase. Still further, a bee keeper can save a lot by making his own hives and frames winters.

I tell you my friend, you can have 500 colonies in five years, probably in less than that, if you will only make up your mind to do it, and then work for it. Once you have that number in a good location, you can make some money and be able to surround yourself and family with comforts—perhaps some luxuries.



Shall Some Space in the Review be Devoted to Beginners?

Quite frequently some beginner in bee keeping writes and protests against the advanced character of most of the matter in the Review. He says it is probably all right for bee keepers who have had some experience, but he is just starting and wants something more elementary.

My idea of this matter has always been that all beginners ought to first read one or more text books. That is what text books are for—to state fundamental principles and well-established facts. To me, it has always seemed like an injustice to the majority of subscribers, and a great waste of space, to publish year after year, in a journal, those things that can be found in almost every text book. The journals are for the discussion of *new* things.

In this connection some one has asked for a query, or questions and answers, department. This is entirely a different matter. Questions may be asked on the most advanced subjects. Any one is welcome to send in questions, and, if they are of general interest, I shall take pleasure in answering them in the Review to the best of my ability.

Since the foregoing was written, I have received a letter on this subject from my friend Pettit, of Ontario. I think it is a very fair exposition of the views in opposi-

tion to my own, so very fair, indeed, that I give it.

AYLMER (WEST), Can., Jan. 9, 1911

Dear Mr. Hutchinson:—Answering your questions how to improve the Review, I am forced to say: Open a department especially for beginners; and have the best writer you can get to prepare an article, a seasonable article, for each month. Have the articles just a little ahead of time, that beginners may read and understand them just a little before the information is needed. Then it will be fresh in their minds, and can be used when needed. I would not have the same writer more than for one year. A new man will tell the same thing in a different way, and very likely bring into view some useful points neglected by his predecessor, thus adding information and interest. Then the next year you could give to new subscribers the previous year's issue. Thus beginners could get help from two able writers for the price of one year. The third year you could give with the Review, a booklet of the two previous years' articles.

Another thing: We all like punctuality and especially so when loss comes with lateness.

Have your writers be specific in detail, and write as though your beginners knew but very little, or nothing at all, about bees; for, as a matter of fact, generally, their ignorance on bees and bee keeping is dense indeed. So much depends upon knowing *why*, *when* and *how* to do things and then doing them according to knowledge.

You may say: They should get a bee-book. But I tell you that a good periodi-

cal wanted tomorrow, or very soon, will be read with more interest and better understanding, than will a book. A bee journal is designed, intended, to teach those who need teaching, and you will find that characteristic in practically all beginners. Example: A year last July I was visiting a relative who had about a dozen hives of bees. He is one of the most progressive and wealthy fruit growers in the Niagara district. He had the entrances covered with queen excluder zinc. He said they were tacked on so the queen could not go away with the swarm. There was some surprise when I told him of all the disastrous results that would follow.

In all of my canvassing for subscribers the only ones I can reach are the beginners, and the Review, in my opinion, can be greatly improved for his benefit. I would suggest that you illustrate the articles with cuts and editorial comments. Editorials are generally helpful and appreciated. Just make that department so bright, sparkling and useful that even the decrepid and the stalwart fathers will say: Well done! and your beginners will bless the Review and stay by it.

Respectfully,

S. T. PETTIT.

The Review is what my subscribers make it; or rather I *try* to make it what they *want* it to be, if I can find out. It will be a very easy matter to add a beginners' department on the plan suggested by our Canadian friend; and if the majority approves, I'll do it. Let me hear from my readers. A majority vote shall decide the question.

Selected Articles.

AND EDITORIAL COMMENTS.

SYSTEM AND MANIPULATION

The Lack of These is why Some Men
Don't "Keep More Bees."

Wesley Foster, of Colorado, in writing to Gleanings says he thinks that one

man ought to care for 500 to 700 colonies, with possibly some help in the summer. In explaining why some men keep so few bees, he says:

Perhaps the main reason so many bee men can not care for more bees is because they lack a good system of manipulation. I think the only solution of the question is to keep more bees and

get more for our honey' by improving its quality and stimulating the use of honey among those who rarely eat it.

CURRENT READING

It's Trend Should be Carefully Watched by the Parent.

Many men have written and thanked me warmly because I have called their attention to the *Success Magazine*; but my interest extends even to the *children* of my subscribers. I feel that they, too, ought to have the best of reading. In fact, I think the *kind* of reading that children have is really of more importance than that read by the grown-ups. A circular sent out by the *Youth's Companion*, covers this point so perfectly, so *delightfully*, that I hope I may be pardoned for reproducing it, even if it is of some length. If you are a parent, I beg of you to read it. It is as follows:

More and more clearly is it recognized that the public of today is being educated by the publications of general circulation. Greater responsibility, therefore, rests on the publisher for his production, and on the reader for his selection, of periodicals.

The present multitude of periodicals has this serious disadvantage: we are tempted to use our leisure, not in the fruitful reading of one, but in the careless and unproductive skimming of many. If in the home there are young people with mental habits yet unformed, it is especially better to have not many periodicals, but a few, each one of which has been thoughtfully selected.

What periodicals we do have should be the best. In determining which these are we should be sure, first of all, that the weekly paper or the magazine for which we subscribe is edited not merely for the selfish interest of the proprietor, but really for us. The publisher of a popular periodical is under a constant temptation to sacrifice the interest of his readers to the desire to gain greater circulation. Under the plea that he "must give his readers what they want," he surrenders his moral self-respect and shirks his plain duty as a public servant. The publisher concerned chiefly for the commercial value of a large circulation has not the courage to give the conscientious editing which insists upon the best work

of the best minds. He is in the shameful position of one who uses the great moral instrument which he controls solely for his private gain.

THE PARENT IS THE LEADER.

We must be sure, therefore, that the periodical we invite to our homes is honestly edited for us. If there are young folks, the reading of the home must be watched with double care. Boys and girls enjoy the same sort of reading as their parents; for the very young, it must, of course, be more simply phrased, but even for them it need not be different in kind. Parents are, in any case, the natural leaders in selecting the reading for the family. Whether they realize it or not, what they read will powerfully affect the choice of their young folks. They need not think that they can indulge in questionable reading and not have their children do so, too. In the family no book or periodical should be allowed which does not help to build mind and character, and is not an inspiration to high ideals. It is both a parental and public duty to see that young folks are wisely guided in their reading. Their emotions are quick, their imaginations overactive and undisciplined, their love of excitement is keen; the critical powers are low, their judgment is immature, their knowledge of the realities of life is practically nil. They have, as a result, substantially no natural protection against the literary charlatan and quack.

STORIES OF CRIMINALS.

Even the boy of the best upbringing may be attracted by the sensational story of impossible adventure, by tales of crime and criminals, by cheap, slangy and vulgar comicalities. The girl may be fascinated by the silly, false and offensive sentimentality of a certain mushy kind of cheap love-story. They may, in short, be easily caught by any writing which is crude in color, violent in incident, questionable in taste and specious in morals. How can they know, who as yet know little of life, that these highly colored pictures of it are most misleading?

At its worst, cheap reading destroys their minds and their morals. For the pleasure given by this reading is, in its essence, a sort of nervous excitation differing little from that afforded by certain drugs. It becomes a habit, a dissipation, a deeply rooted craving for excitement almost impossible to destroy. It spoils all taste for really wholesome

books, it makes anything like mental application impossible; it weakens the moral fiber as any vicious indulgence weakens it, as any habit which masters the individual weakens him. And having thus debilitated mind and character, this "literature" adds to its evils effects by all sorts of immoral and vicious suggestions. Science of late years has taught us more than we ever knew before of the subtle power of suggestion; *better* than ever before, consequently, can we realize the mischief done by unwholesome books, periodicals and newspapers. Those who print fascinating stories of fast life, of thieves, confidence men, and race track gamblers and all that disreputable crew, incur a heavy responsibility. Their Satanic literature makes fast boys and girls, and of fast boys and girls, some are sure to become criminal men and women.

READING IS COMPANIONSHIP.

Contrast with the young people with whom reading has degenerated into a vice the boys and girls whose taste has been trained and strengthened. There is no greater benefit than a sound taste for reading, a cultivated love for what is best. For what is reading in its highest form but companionship with the best informed, most learned, most moral, most cultivated minds in the world? It is to have the character strengthened, the efficiency increased, the mind "supplied" and exercised, the spirit refined and exalted. It is to have efficient mental power—the ability, that is, to concentrate the mind.

Not many boys and girls probably will reach either the lowest degradation of reading or its most exalted plane. What we wish to make sure is that what steps they do take shall be not down but up. The question is how that may be best managed. We believe that the key to the problem lies in the right choice of fiction. Every now and then comes a boy whose natural bent toward mechanics, or botany, or travel, or electricity, or what not, is so strong that he will read instructive books from the start. Happy are that boy's parents, for the task of making his reading useful to him is easy—they have only to see that he does not grow mentally lopsided by too exclusive attention to his hobby. But not many boys, and perhaps fewer girls, have such strong natural bents. But there never was a child since the dawn of time who did not beg for a story. The love of a story is deeply implanted in human nature, and is universal; and through this taste for fiction,

the writer and editor can reach the nascent character and do a useful work—nor need he disdain or any parent fear an instrument which He Who told the parables did not despise.

A HIGH PURPOSE NECESSARY.

The writer for the young, whose aims are really high, must first of all make his fiction interesting. Then into his fiction he must inject the salutary influence. This he may do in a great variety of ways. He may, for example, utilize his tale of adventure to awaken a taste for natural history, an interest in foreign lands, people and customs, or to give an interesting lesson in geography, or to instruct in the wonders of some courageous trade like bridge-building or rail-roading. Again, he may utilize his story of temptation and moral struggle to awaken admiration for the nobilities of character. It is possible for the story teller to start a thousand impulses toward reading of a higher grade; the actual transition from fiction to the literature of instruction is what he cannot manage.

A GOOD PERIODICAL A LIBRARY IN ITSELF.

That, the parent, the librarian and the editor can do. The parent may assemble a library for his children, can guide, help and suggest, say the word in season which encourages the leap from good fiction to better fiction, from the hunting sketch to the book on nature, from the historical tale to history. But not many parents have the money to buy books or the leisure to do the teaching, and some have not the tact and knowledge, and public libraries and libraries are not omnipresent.

It is the editor who can do most. The periodical costs infinitely less than the private library; it is not fixed, like the public library; at small expense it can be brought into the remotest home. But what is a still greater advantage is the fact that it can print the instructive and the entertaining, fiction and fact in juxtaposition—where the most thoughtless young reader will some time be prompted, having read the one to read the other. The editor can grade his reading, and vary it, and so provide a constant inducement to readers to take a step upward. The ideal periodical for the family will be one so edited and arranged as to provide what may be called a graded school of reading, which can take the youngest child and lead him up and on until he reaches maturity, and then—still interest him! For since the parent, as

has already been said, is the natural leader in the reading of the family, a family paper will be the best—a paper, that is, which is interesting to old and young alike, which they read and discuss together, and which makes for real companionship between all the members of the family. No parent recognizing his responsibility for the family reading, can fail to see what opportunities for correcting, stimulating and directing the family taste are afforded by the constant, familiar family discussion of what is read in common by himself and his wife, his daughter and his son.

Of course, I do not need to say that the Youth's Companion lives up to the high standards set forth in the above. The reading of the Companion, by a growing child, will have an influence almost the equal of parent or teacher. In fact, it seems to me as though a child brought up without the Companion has almost been robbed of its birthright. If you have children get the Companion for them, and they and you will bless the day that I urged you to this course. It is only \$1.75 a year; or I will club it with the Review for only \$2.50, but the subscription to the Companion must be a new subscriber.

PRICES OF HONEY.

They are Really Higher than they were a Dozen Years Ago.

Much has been written to show how prices of most food stuffs have advanced in greater proportion than that of honey. I think this is true to a certain extent, but, perhaps, not so great as appears at first thought. At the Albany convention this question was discussed at great length, and I think one of the most pertinent speeches was made by Mr. Wm. A. Selser, when he said:

I don't recall what was in the bee papers as to quotations 23 years ago, but I do know something which to me is much better than that. I know actually what honey brought 23 years ago, and something about what it is bringing today. In substantiation of that statement I want to say that probably some of you here know that it was not so many years

ago when buckwheat honey in kegs was offered in this State at $3\frac{1}{2}$ cents a pound. I was up in this State some 20 years ago and bought a carload of buckwheat honey at that price. To-day that very same honey is sold right in this State, within the last thirty days, at seven cents a pound. That doesn't look very much like a decline in prices. I also went to Wisconsin and Michigan 10 or 15 years ago, and I contracted there in car lots for white clover honey in barrels at $5\frac{1}{2}$ cents f. o. b., and the individual bee keepers through Wisconsin were only getting 5, $4\frac{1}{2}$ and $4\frac{3}{4}$ cents, and they were very glad to have me contract with them. This year that very same honey in barrels has sold at those same points for 8 and $8\frac{1}{2}$ cents a pound. That doesn't look very much like a decline. Sitting over there at the side is a gentleman I have been dealing with for many years for fancy white clover honey in the comb, and he can remember not so very many years ago when you could get, right up in St. Lawrence County, that honey for about 13 or 13 and a fraction cents. New York people bought it in car lots some 15 or 20 years ago. This year that same honey is sold for 16 and $16\frac{1}{2}$ cents in car lots. Gentlemen, you are very much mistaken when you make the statement that bee supplies have gone up and honey gone down. That is positively incorrect. I think we have never seen a time in a quarter of a century that honey brought as good prices as it is bringing today.

There is still another point that ought not to be overlooked, viz., that honey production has increased from 50 to 100 per cent. in the last 15 years. We are learning to keep more bees, and to produce more honey at less cost, and, best of all, the demand has so improved that honey can be sold for spot cash any day during the year.

RETAIL HONEY PACKAGES.

Glass, Tin and Paper all have their Advantages.

When a bee keeper decides to put up his extracted honey for the retail trade, the first question that confronts him is: "What shall the package be?" We may talk all we may about the expense of

glass for containers, its use shows up honey more attractively than any other package. A bottle, jar, or pitcher filled with honey, and held up to the light, glitters, and glimmers, and shimmers, and shines, and shows the color and body of the honey, allows the customer to "taste it with her eyes," so to speak. In a grocery store where goods must sell themselves by their appearance, glass allows honey to do its own talking and showing off of its beauties, hence it is supreme for that purpose. If these glass packages are of such a nature as to be of some use after the honey has been used, it will help reduce the expense to the consumer. I have recently been looking over the report of the National convention held last fall at Albany, N. Y., and I note that this question of retail-honey-packages received a most thorough discussion. On this point of using glass, Mr. Davis of New York, said, among other things:

I think the housewife would be willing to pay the added expense, the difference between glass and tin, provided the glass is something which she can use in household preparations, such as the Mason jar or the Economy jar, with the vacuum or easy seal and use that glass receptacle in some other way in the future. There is absolutely no doubt that the argument is in favor of the glass package as against the tin, but it is really an expense on the consumers, unless they can use it in some other way in the future.

Right along in this line, Mr. Crane of Vermont, who has had years of experience in putting up honey for the retail grocery trade, said:

We have had some experience along this line; we sell through the wholesale grocery trade to the retailer, and I find the trade in glass is increasing very rapidly, whereas the tin package (we put up the quart friction-top tin can) is decreasing, and the reason is that it sells in glass better than tin, because it shows it up. There are a great many people who like honey that never think to order or buy it unless their attention is called to it either by inquiry or seeing it. The tin package has a label on it, but it does not catch their eye as honey in the glass

does. There is a difference in the price. The retail grocer has his choice, and he will pick the glass package 99 times out of 100.

When the bee keeper can meet his customers personally, the use of glass packages is unnecessary. In fact, the cheaper package has the advantage, as it allows the customer to get more honey for the same price. No matter what the package, the bee keeper can open it, and expose the contents, also give a taste of the honey which is the most potent argument. When consumers can be reached in this manner, tin pails or cans are the ideal packages. This style of package allows the honey to be put up and offered in larger quantities. On this point, Mr. Hershisser, at the Albany convention said:

I use a five-pound lard pail, and I like the flaring lard pail; it the cheapest tin package I can get. The cheaper the package you can use, the more honey you can sell, and seven pounds will go for a dollar just as quickly, practically, as though you put up ten.

In a mail order trade, it matters little what the package is, so long as it carries the honey safely and does not cost too much. The customer can't see the honey nor the package before buying, consequently attractiveness cuts no figure. By the way, my experience in the mail order trade has given me dreams of some one, some day, building up an *immense* business in selling honey in small quantities all over the country, sending it by express. Of course, the quantity can't be *too small*, as the transportation charges would be too great in proportion to the cost. For this trade I think that the paper bottles packed in a neat, light, wooden box would be the ideal package. Ten pound-bottles, filled with honey, might be sold for \$1.50, and express would not average over 50 cts. thus giving the consumer the finest possible article of extracted honey at 20 cts. a pound. With the right kind of honey, management and advertising, I am satisfied that an immense trade of this kind might be established.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

PATENTS START FACTORIES



We Secure Patents. **NO FEE IF WE FAIL.** Start right. Free book—How to obtain, finance, and promote patents. Send sketch or model for free search. FARMAN & SUES, Pat. Attys., WASHINGTON, D. C.

Camera For Sale

I wish to sell my camera, and I'll tell you why. My health, the condition of my heart, will not allow me to lug any heavy loads in the future, and an 8 x 10 view-camera, with tripod, plate holders and plates makes quite a lug. After such a camera is once on the spot, it is decidedly superior for the making of superb photos, but I must be content with something a little smaller and lighter—possibly to use films instead of glass plates. To one who is to do most of his work at or near home, or who is strong and rugged and able to carry the camera if necessary, nothing is better than a camera like mine. I have had it several years, but have always used it with care, and it would be almost impossible to distinguish it from an instrument right from the shop. It is the Empire State, made by the Rochester Optical Co., of Rochester, N. Y. My entire outfit, and the cost is as follows:

Camera.....	\$28.00
Rapid Rectilinear Lens.....	20.00
Folding Tripod.....	3.50
Low Shutter.....	4.50
6 Double Plate Holders at \$1.85.....	11.10
14 Inside Kits for using smaller plates at 40 cents.....	5.60
Ray Filter.....	3.00
Canvass Carrying Case, Felt Lined.....	3.50

Total \$79.20

I would sell the entire outfit for \$50.00, and the man who buys it would get no better if he bought direct from the manufacturer, and paid about \$25.00 more for it. Any questions cheerfully answered.

w. Z. HUTCHINSON, Flint, Mich.

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

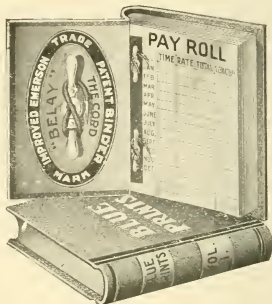
Made from Honey and Water

In any kitchen, at any hour, at a cost of 5 to 7 cents per gallon. Process by mail \$1 00

C. W. Dayton. Chatsworth, Calif.

The Emerson Binder

¶ Much of the value of a bee journal comes from being able to find and refer to any of its issues. Reference is often made to some item or article in a previous issue, and the trouble of finding the back number is often so great that it is neglected. At the end of the year a subscriber often finds that one or two issues are missing and the publisher is not always able to supply them.



All of this trouble may be avoided by the use of a binder. The best binder on the market is an Emerson. It has stiff board covers, bound in heavy cloth, neatly embossed on the front. It is the work of only a moment to place each issue in the binder as it comes to hand, and one binder will hold two years' numbers of the Review.

The price is 75 cts. prepaid, or I will send the Review one year, and a binder for only \$1.60.

W. Z. Hutchinson, Flint, Mich.

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-1f

Electric Motor For Sale

We sold our printing office last summer to a firm already equipped with motors, hence they had no use for our motor, and it is still on hand. Here is a description: It was manufactured by The General Electric Co., it is type C. A., continuous current, of 500 volts, speed 2,000 revolutions per minute: $\frac{1}{2}$ horse power. There is also a starting box and speed controller, which allows the motor to be run at different speeds. The entire outfit cost us \$55.00, and is exactly as good today as when we bought it, yet we would be glad to sell it for \$25.00.

W. Z. Hutchinson, Flint, Mich.



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50

DOOLITTLE "QUEEN-REARING" BOOK FREE TO FEBRUARY 1**With the AMERICAN BEE JOURNAL One Year---Both for \$1.00****READ THE FOLLOWING PARTICULARS**

No doubt there are thousands of readers of The Review who would be glad to read the old AMERICAN BEE JOURNAL regularly if they once get started. In order to induce them to make this "start" we will send a copy of Doolittle's "Scientific Queen-Rearing" book with every new subscription order for one year with \$1.00 received between now and February 1, 1911. (The price of this book, bound in cloth, is \$1.00; but we will send a copy of the leatherette-bound book. All except the binding is the same in both books.)

The AMERICAN BEE JOURNAL is \$1.00 a year—a large 32-page monthly. Every bee keeper ought to have it; and in order to induce several thousands of readers of the Review to take it for 1911 we make the above generous offer. Now is your chance to get a copy of Doolittle's great "Queen-Rearing" book free. Better sit right down and send in your order with \$1.00 for the book and the AMERICAN BEE JOURNAL for 1911. Sample copy of the Bee Journal free. Address

GEORGE W. YORK & CO., 117 N. Jefferson St., CHICAGO, ILLINOIS**WHOLESALE****BEE SUPPLIES****RETAIL**

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,**Opp. Lake Shore Depot.****Lansing, Mich.**

**PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.**

**"If goods are wanted quick, send to Pouder."****BEE SUPPLIES**

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER MILK BOTTLES

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

**WALTER S. POUDER, Indianapolis, Ind.
859 Massachusetts Avenue.**

"DADANT'S FOUNDATION"

IT EXCELS.

Every Inch Equal to Samples.

Beauty, Purity, Firmness. No Sagging. No Loss. Twenty-seven years of Experience. We guarantee satisfaction. Wax worked into Foundation.

Bee Supplies of all Kinds.

Beeswax Wanted at all Times.

A. G. WOODMAN, Grand Rapids, Agent for Michigan.

Send for Catalog.

DADANT & SONS, Hamilton, Ill.

Write us Today

For our 1910 catalog and let us tell you all about

DITTMER'S FOUNDATION

and WORKING your WAX for you.

Write us for ESTIMATE on full LINE of SUPPLIES. It will pay you and costs nothing,
RETAIL and WHOLESALE

GUS DITTMER COMPANY, Augusta, Wis.

D. Cooley can fill your orders with the
A. I. Root Company's

STANDARD BEE SUPPLIES

On short notice. Catalog free.

D. Cooley, Kendall, Mich.

ITALIAN BEES and Queens and
standard goods. Ask for circular. Aliso Apiary, Root's
El Toro, Calif. 2-10-11t

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 75 cents; tested 90 cents; select tested, \$1.10; breeder, \$1.65. One-comb nucleus, no queen, 80c. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation.

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

5-10-tf

New Catalog Now Ready

Of Dovetailed Hives, Marshfield Sections, Dittmer's Foundation and all kinds of bee keeper's supplies at Reduced Prices, (car loads in stock). Also all kinds of Berry Baskets, Hallock Cups, Hallock Boxes and Crates to match.

Honey and Beeswax Wanted, Wax 30c.

W. D. SOPER, Jackson, Mich.

323-325 S. Park Ave.

1-11-8t

A Post-Card Projector

A year ago San'a Claus brought my eight-year grandson, Bruce Hanneman, what is called a post-card projector. By means of a powerful light, any bright picture the size of a postal may be greatly enlarged and thrown upon a screen. If you have a Youth's Companion premium list, you will find this projector illustrated and described, only the one that we have uses a 32-candle power electric light, instead of gas. This is a very interesting toy for children, but my grandson has played with his so much that he has tired of it, and he came to me and said: "Grandpa, couldn't we advertise this in the Review, and sell it, and then take the money and buy something else?" So I'm trying. It cost \$3.50 new, and is just as good now as the day it came, but we will sell it for only \$2.50. Shipping weight 4 lbs. Must go by express, and charges paid by receiver.

W. L. Hutchinson, Flint, Mich.



are our specialty. We furnish such extensive bee keepers as E. D. Townsend and others. Consider getting your bees into Protection Hives this fall. Give us list of goods wanted.

A. G. WOODMAN COMPANY

GRAND RAPIDS, MICHIGAN

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 12, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

CLUBBING LIST

Here is a list of some of the periodicals, together with prices, that I can furnish with the Review.

	Publisher's Price	With Review
18 American Agriculturist.....	\$1 00.....	\$1 90
15 American Bee Journal.....	1 00.....	1 75
15 American Boy.....	1 00.....	1 75
22 American Magazine.....	1 50.....	2 10
22 American Photography.....	1 50.....	2 10
15 Boy's Magazine.....	1 00.....	1 75
22 Breeder's Gazette.....	1 75.....	2 10
35 Buffalo Express (Weekly).....	2 00.....	2 75
15 Canadian Bee Journal.....	1 00.....	1 75
18 Camera.....	1 00.....	1 90
72 Century Magazine.....	4 00.....	4 60
14 Chicago Inter Ocean and Farmer..	1 00.....	2 10
88 Colliers' Weekly.....	5 50.....	5 40
4 Comfort.....	25.....	1 20
16 Cosmopolitan.....	1 00.....	1 80
22 Country Gentleman.....	1 50.....	2 10
62 Country Life in America.....	4 00.....	4 10
22 Everybody's Magazine.....	1 50.....	2 10
9 Farm and Fireside.....	50.....	1 45
18 Farmers' Review.....	1 00.....	1 90
5 Farm Journal (2 years).....	35.....	1 25
9 Farm Poultry.....	50.....	1 45
15 Gleanings in Bee Culture.....	1 00.....	1 75
24 Good Health.....	1 50.....	2 20
20 Good Housekeeping.....	1 25.....	2 00
9 Green's Fruit Grower.....	50.....	1 45
22 Hampton's Magazine.....	1 50.....	2 10
68 Harper's Magazine.....	4 00.....	4 40
16 Health Culture.....	1 00.....	1 80
18 Hoard's Dairyman.....	1 00.....	1 90
18 Hunter, Trader, Trapper.....	1 00.....	1 90
32 Independent.....	3 00.....	2 60
25 Ladies' Home Journal.....	1 50.....	2 25
74 Leslie's Weekly.....	5 00.....	4 70
22 McClure's Magazine.....	1 50.....	2 10
19 Metropolitan Magazine.....	1 50.....	1 95
14 Michigan Farmer.....	75.....	1 70
19 Munsey's Magazine.....	1 00.....	1 95
28 New England Magazine.....	1 50.....	2 40
13 Ohio Farmer.....	75.....	1 65
18 Orange Judd Farmer.....	1 00.....	1 90
44 Outing Magazine.....	3 00.....	3 20
57 Outlook.....	3 00.....	3 85
20 Pearson's Magazine.....	1 50.....	2 00
25 Physical Culture.....	1 50.....	2 25
58 Popular Science Monthly.....	3 00.....	3 90
40 Recreation.....	3 00.....	3 00
9 Reliable Poultry Journal.....	50.....	1 45
40 Review of Reviews.....	3 00.....	3 00
25 Saturday Evening Post.....	1 50.....	2 25
54 Scientific American.....	3 00.....	3 70
55 Scribner's Magazine.....	3 00.....	3 75
29 Sports Afield.....	1 50.....	2 45
47 Suburban Life.....	3 00.....	3 35
15 Success Magazine.....	1 00.....	1 75
18 Wallace's Farmer.....	1 00.....	1 90
13 Wisconsin Agricultural.....	75.....	1 65
34 World's Work.....	3 00.....	2 70
22 Woman's Home Companion.....	1 50.....	2 10
30 Youth's Companion (new.....	1 75.....	2 50

To find the price for more than one paper, and the Review, add together the numbers *preceding* the papers wanted, multiply the result by 5, add \$1.00, and the sum will be the amount to send.

I can furnish any periodical published. If you don't find what you want in the above list, write me.

At these prices there is very little direct profit to me. It simply makes it easier to renew, and helps my readers to secure their reading matter at a lower price.

W. Z. Hutchinson, Flint, Mich.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent, when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 10 to 11c; beeswax, 30c.

Jan. 31 1910

BLAKE-LEE CO
4 Chatham Row

NEW YORK CITY—Regarding comb honey, we have nothing new to report. Trade is quiet, demand slow, even for fancy and No. 1 white; while off grades, mixed a d buckwheat are neglected altogether, and for the present we cannot encourage shipments of comb honey of any kind, as we have all we can do to dispose of the present holdings. Extracted in good demand with prices firm. We are in the market for fancy stock, white clover or alfalfa, and would be glad to hear from producers who have any to dispose of. Beeswax quiet at from 29c to 30c per pound.

Jan. 23, 1911

HILDRETH & SEGELKEN,
82 Murray St.

CHICAGO—There is a scarcity of extracted honey especially from the Linden and clover nectars, which is being felt by the trade. Beeswax in good demand. We quote the following prices: Fancy white, 18c; No. 1 white, 17c; fancy amber, 15c; No. 1 amber, 10 to 12c; fancy dark, 9 to 10c; white extracted, 8 to 9c; amber, 7 to 8c; dark, 7c; beeswax, 32c.

Jan. 21, 1911

R. A. BURNETT & CO.,
199 S Water St.

CINCINNATI—While the price on fancy comb honey is very firm, the demand is not as good as it was 60 days ago owing to the fact that the many bee keepers bring in their little lots to the country stores which lessens the demand from the jobber. We are selling strictly fancy comb honey in 24 section cases, \$4 00 by the single case, and to the jobber at \$3 75. Amber and dark comb honey is not wanted at any price. Extracted honey is suffering to some extent in demand as it always does around the holidays. There is no reason for lowering the prices stated, it will not hasten the sales; we therefore quote amber honey in barrels, according to quantity and quality purchased, from 5½c to 7½c; fancy white in 60 lb. cans from 9c to 10c. We are paying for choice beeswax from 28c to 30c per lb delivered here.

Nov. 21, 1910

THE FRED W. MUTH CO.

KANSAS CITY—The demand for comb and white extracted is good. The demand for amber extracted is very light. Beeswax good demand. No. 1 white, per case of 24 sections, \$3.50; No. 1, amber, \$3.25; No. 1 dark, \$2.75 to \$3.00; white extracted 8½ to 9c; amber, 7 to 7½c; beeswax, 30c.

Jan. 21,

C. C. CLEMONS PRO. CO.

FOR SALE 100 hives bees in two story standard hives \$5 00 per hive
f. o. b. station. Box 545, San Antonio, Texas.

ROOT'S GOODS

For Western Pennsylvania. Liberal early order discounts. Gleanings and choice queens

GIVEN AWAY

Write at once for circular. Time is limited.

GEO. H REA, Reynoldsville, Pa.
Successor to Rea Bee and Honey Company
11-1C-1f

To you who buy

QUEENS

We breed Carniolan, 3-Band Italians, Caucasians and Goldens. Ready to mail April 15. Order now to insure your queens when you need them.
Address **JOHN W PHARR, Berclair, Texas.**
2-11-1f

Situation Wanted By a young man who has successfully passed examination after taking course of lectures and practical work in Apiculture at the Ontario Agricultural College. Anyone desiring help of this kind for the season of 1911, kindly correspond with Morley Pettit, Provincial Apiarist, Ontario Agricultural College, Guelph, Canada.

THIS BRAND MEANS BEE SUPPLIES

Scientifically Made

OUT OF
GOOD MATERIAL
TAKE NO OTHER



**30 DISTRIBUTING HOUSES
SEND FOR FREE ANNUAL
1911 CATALOG**

GIVING NAME OF NEAREST ONE

G. B. LEWIS CO.
WATERTOWN, WIS.

Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How These Moving Pictures Were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds, so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will show a scheme for screening a honey house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M. will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet clover seed, *Melilotus Indica*, postpaid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires.**

To encourage old subscribers to secure new ones we will send a one pound package post paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

Yellow Sweet Clover (*Melilotus Indica*). What is it?

This we believe is a very remarkable honey plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and **we now have on hand something like a carload.** The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis* and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

Do Not Delay Ordering

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

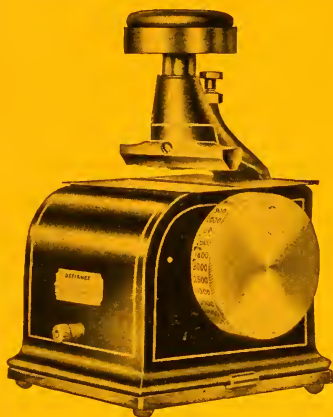
The A. I. Root Co., Medina, Ohio

MARCH, 1911



Flint, Michigan, \$1.00 a Year

The Defiance



Check Protector

Only \$15.00

Why Pay More?

New Steel Matrix Model with letters and figures in slits is the best and only absolute protection against check raisers. I prepay express on free trial without deposit.

Mail the Coupon Today

Before the free trial allotment is exhausted and stay your decision until the Defiance is in your hands.

This line protects 

NOT OVER FIFTEEN DOLLARS \$15*

BECAUSE

The **Limiting Line** is Stamped across the face of the check with **Slotted Type Breaking** the fibre of the **Paper** and the **Indelible Ink** is Saturated through to the **Other Side**. Any attempt to erase or alter this impression must mutilate the paper. It is very simple to operate, only two movements being necessary to mark any amount. No screws or complicated springs to get out of order as in other makes. Every machine guaranteed for a year. Its simple mechanism assures perfection. The U. S. Government and 90 per cent. of the world's bankers and business men heartily endorse **The Defiance** by using it.

The **Price** is now so low that no body issuing checks can afford to be without it, as it is an absolute insurance of your bank account for life and limits liability of each signature.

I have prepared a little booklet on the ways of raising checks, the punishment therefor, laws and and court decisions, and some statistics as to the risk of loss from unprotected checks. It will interest and perhaps profit any man who writes a check and will be mailed free on request.

Geo. Brunsen, 81 Lake St., Chicago, Ill.

Dear Sir: We will use your Defiance Check Protector ten days if you send it express prepaid on trial and approval. Send dial running to \$1,000, \$5,000 or \$10,000. (Designate which amount.)

We do not obligate ourselves to buy, but simply agree to test its merits for ten days, and if satisfactory we will gladly remit \$15 at the expiration of the trial period. Otherwise, we will return it after ten days at your expense. Ship to

PIN TO YOUR LETTERHEAD

Dial to run to \$.....

Mr.....

Firm.....

County.....

City.....

It tells you

How \$5,179,125.00 was stolen by raised checks last year.

Who had to make this shortage good?

How anybody can raise your checks.

Why newspapers publish only a few cases of check raising.

Why our \$15 Defiance saves \$15 in cold cash.

Why you should refuse to sign another unprotected check.

THE DEFIANCE MACHINE CO.

81 Lake St., Chicago, Ill.

Now for 1911 Bee Supplies

We have already received several carloads of that "finest of all Beeware"—Falconer make, anticipating the heavy rush of orders sure to come this Spring. Prepare yourself NOW, Brother, for we are going to have a heavy honey yield this season, and those who order early are the ones who will profit most. Send for our catalog today and see our "MUTH SPECIAL" Dovetailed Hive and also our "IDEAL METAL" Cover—both dandies. We sell you cheaper than the rest; we have the best. Let us figure on your wants—we will surprise you.

The Fred W. Muth Co.

51 Walnut St.

"The Busy Bee Man"

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by
using our Foot Power

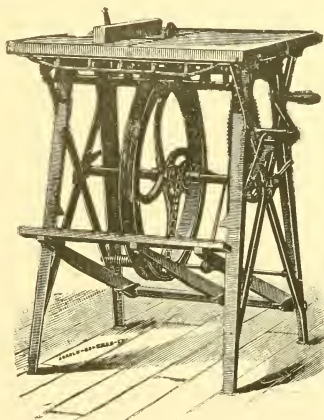
SAWS

in making their hives, sections
and boxes.

Machine on trial. Send for Cata-
logue

W. F. & Jno. Barnes Co.

381 Ruby Street
Rockford, Ill. Illinois



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

Let us hear from you, if
you want anything in the

BEE SUPPLY OR POULTRY SUPPLY LINE

Write for our

FREE CATALOGS

C. H. W. WEBER & CO.

2146 Central Ave.,

CINCINNATI, OHIO

1911 Catalog of

“Falcon”

**Hives, Sections, Foundation
and Complete Line Ready**

Write for your copy

FALCONER, N. Y., just south of Buffalo, directly opposite Detroit is the location of our factory. Quick time and low freight to bee keepers in the Detroit district.

CHICAGO, ILL., 117 Jefferson St., branch with complete fresh stock. makes rush shipments to Central, Western and Northern Michigan bee keepers.

W. T. Falconer Mfg. Co.

Factory, Falconer, N. Y.

117 N. Jefferson St., Chicago, Ill.

CLUBBING OFFERS

Everybody knows about the Bingham smoker. The Conqueror size gives sufficient smoke, and is as good as a larger size, except that it needs filling a little oftener. The price, postpaid, is \$1.00, but I will send the Review one year and a Conqueror for only \$1.75.

Twentieth Century Smokers have a diameter of $3\frac{1}{2}$ inches, are 7 inches deep, have a double draft, double walls lined with asbestos, a hinged, one-piece cover, and the bellows is fastened on with ribbed steel brackets. The price, postage paid, is \$1.25, but I will send one with the Review one year, for only \$1.75.

Advanced Bee Culture is a beautiful book, delightfully written, neatly printed, lavishly illustrated and handsomely bound, but, of greater importance, the reading and heeding of its contents will put any practical bee keeper on the high road to success. A new edition will soon be out. It will be largely re-written and much new matter added. Price \$1.00, or the Review one year and the book for only \$1.90.

A good fountain pen is a great convenience, and the Parker certainly fills the bill. I have carried one for years, and I know. It does not leak and daub the fingers, while the "lucky curve" feature makes the point always inked, ready for business. The \$2.00 pen is exactly as good as any pen that is made; the higher priced pens simply having more fancy handles. For \$2.50 I'll send the Review one year and a \$2.00, Parker, gold fountain pen.

The Advanced Bee Veil is the most satisfactory veil that I have ever worn. It is not tucked inside the collar, but is fastened and held down firmly, by a cord, out on the shoulders, several inches from the neck, thus making it simply impossible for the bees to sting the neck through the veil, as is the case with an ordinary veil. Price of the veil is 60 cents, but I'll send the Review one year, and the veil, for only \$1.50.

In my estimation, few apicultural writers are the equal of E. D. Townsend of Michigan. He has had a long, wide and successful experience, and knows how to tell about it in that plain, simple, straight forward manner that is so easily understood. I was more than delighted when I learned that he had written a book on bee keeping. While it is especially for beginners, it has much of value in it for the veteran. The price of the book is 50 cts. or I will club it with the Review one year for \$1.35 for the Review and book.

W. Z. Hutchinson

Flint, Mich.

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying-press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.

S. J. Griggs & Company

Formerly with Griggs Bros. Co. carry a full and complete line of

Root's Bee Supplies

Send for catalog. Beeswax wanted.

S. J. GRIGGS & CO., Toledo, Ohio

26 N. Erie St.

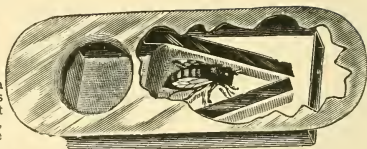
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Bee Supplies

You will find it to your advantage to send for our 1911 catalog. We promise Good Goods, Prompt Shipment and Fair Treatment. Give us a trial order and you will not regret it. Try our Splendid Telescope Hives. They give satisfaction wherever used. Made from the celebrated red wood of the Pacific coast.

E. T. FLANAGAN & SONS, Belleville, Ills.

FOR SALE 100 hives bees in two story standard hives. \$5.00 per hive f. o. b. station. Box 545, San Antonio, Texas.



Advantages of BEE ESCAPES

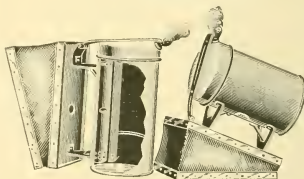
No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFRS.

SEND ORDERS TO YOUR DEALER.

GOLD MEDALS

St. Louis Exposition 1904.
Jamestown Centennial 1907.



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Price \$1.00: two \$1.60; by mail, 25 cents each extra.

Select Italian Queen and Smoker by mail \$2.00.

We sell Danzenbaker hives and supers with metal **propolis shields** and anything in **bee supplies** at **factory prices**.

Send your address and B— friends for catalogs.

F. DANZENBAKER, Norfolk, Va.



The largest grower of pure Alfalfa Clover, Timothy, Red, Alsike and Mammoth Clovers.

The kinds the gentleman farmer and the farmer who respects his lands wants to sow on account of their absolute purity, namely 99.80 and 100 per cent. growth.

The kind America's famous agriculturist, Ex-Gov. Hoard, of Wisconsin, endorses, sows and praises.

Salzer's Seed Catalog Free

It's the most original seed book published, bristling with seed truths, and is mailed free to intending purchasers. Or remit 10c in stamps for 10 pkgs. remarkable farm seed samples, including our famous Alfalfa, Billion Dollar Grass, Speltz, etc.

JOHN A. SALZER SEED CO.
213 So. 8th Street LaCrosse, Wis.



Loading a Car of Bees for the South.

These bees were prepared for shipment in the cellar, loaded January 17th, reached Louisiana in good condition, and are now gathering a crop of Willow honey

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIV.

FLINT, MICHIGAN, MARCH 1, 1911.

NO. 3

Making \$4,000 from Successful Migratory Bee Keeping—A Novel Scheme.

H. C. AHLERS.



LAST February my attention was attracted to an advertisement in one of the bee journals, offering 160 colonies of bees for sale at \$3.00 per colony. The bees

were at Kenner, Louisiana. A correspondence ensued with the owner. Partly for my health I decided to take a trip to Louisiana. I arrived at Kenner Feb. 25th, and looked over the bees. I found 134 colonies that had queens. I sent a check for the amount, and became the owner of the bees. I bought 19 colonies more from another party. The larger lot had mostly young, prolific queens, but were deficient in comb—

probably an equivalent of nine combs per colony.

GETTING A CROP IN THE SOUTH.

When I arrived the bees were carrying in pollen very rapidly from willow. About March 1st, they began getting honey from the same source. I had no extra combs, so I ordered 200 pounds medium brood foundation by express. The bees were now breeding very rapidly, starting to draw out comb and soon built up to two-story, 10-frame colonies. Every effort was made to keep the bees warm, and strengthen the colonies in order to secure a honey crop. The flow from willow lasted till April 1st. Three days later my total honey crop was 6,000 pounds. I had a full barrel of drained cappings, which gave me 60 pounds of fine wax.

After April 3rd, with the assistance of one man, I made divisions as fast as possible. A number of nuclei had been

made a week earlier with the old queens. The bees, still getting honey, had started a great many very fine cells. The divisions were made by taking four to five combs of capped brood, with adhering bees, to a new stand, either a comb with cell or a capped cell in cell protector, was given at the same time, if ready; otherwise a cell in protector a few days later. By this method I doubled the number of colonies.

The spring was dry and very warm in the South. April 22nd I loaded the car. The thermometer registered 84 degrees in the shade. It was soon 90 degrees in the car. I had a fruit car and seven tons of ice in the bunkers. Although the ventilators were all open, the car did not cool perceptibly till after midnight.

The bees arrived at West Bend, their destination, in 90 hours from the South. They were closed in the hives from Friday till Wednesday. I arrived here two days after the big snow storm. The bees arrived in good condition. The colonies had sufficient honey and lots of new pollen. The large amount of capped brood hatched. All hives were quickly filled up again with brood in all stages. By June 10th, most colonies covered three sets of combs with bees.

The confinement and subsequent shaking up causes the consumption of most the unsealed brood. This I think is actually a gain. The young larvae are a better food than honey. The eating of it gives the bees a setback, and prevents, or delays, swarming. The bees, however, are stimulated to a great degree. The queen is fed heavily, and large quantities of eggs, and just hatched larvae, are found when the hive is opened.

The honey from willow is dark green in color, rather rank and of an aromatic flavor. I fed 1,500 pounds of it to my home apiary. It is the best stimulative feed that I ever used.

Some of the colonies when loaded on the car had virgin queens, or capped cells. Most of these turned out worth-

less. The weather was very cold, and the queens failed to mate, or were very imperfectly mated. These colonies with worthless queens were united with others of medium strength in the following manner: After the queen was sifted out, the worthless colony was smoked till the bees were well filled with honey. Then the colony to receive them was smoked in like manner. A third hive was placed on the stand having the laying queen. The combs with brood were first shaken at the hive entrance, and the combs placed in the third box. Then the other combs were shaken in the same manner. In no instance did the bees quarrel or return to the old stand. The extra combs were used to the best advantage.

GETTING A HARVEST IN THE NORTH.

I started the season in Wisconsin with 450 colonies. The season was a poor one. I took 23,000 pounds of honey from clover. There was only a little basswood in bloom, and it yielded no honey. For a number of years my crop averaged 100 pounds per colony from these two sources.

MOVING FOR A FALL-FLOW.

August 26th (one month too late) I loaded 225 two-story hives on a car and shipped them to Illinois, on the Illinois river. These hives started with an average of about four pounds of honey on their trip. One colony starved. 3,500 pounds of surplus honey was extracted Oct. 4th and 5th. This was pure Spanish needle. When the bees had been set in a pasture lot, just outside the levee, hundreds of acres of Spanish needle were beginning to bloom. Now the bees were coming in very fast with aster honey. The Illinois river bottom was covered on both sides, where the land had not been cultivated, with a sea of white flowers.

GOING SOUTH FOR THE WINTER.

Oct. 24th, when I closed in these bees, the hives were very heavy with aster honey. With the help of five men, the

bees were ready to haul in seven and a half hours. At 9:00 p. m. they had been hauled three blocks and were loaded, except the bracing. The car went out 24 hours later, and arrived at Kenner, Louisiana, in four days more. This car of bees shipped in perfect condition. Some colonies had five combs of honey to spare. I had to use some of these surplus combs to help 74 colonies that I bought which were short of provisions. On account of continuous rains, the bees secured very little in the summer and fall in the South.

I found many of my colonies, Nov. 1st, that had four combs pretty well filled with brood in all stages. Many colonies in Wisconsin had no sign of brood since Oct. 1.

The bees start to get pollen from soft maple in Louisiana about January 1st. I will be compelled to extract some old honey at the beginning of the flow, about March 1st.

This is the story of my trip with a car load of bees. Moving three times in one season; securing 32,500 pounds of honey and leaving the bees in the best place, in a perfect condition. No winter chances. No fall and and practically no spring work.

I fancy I hear a number of progressive bee

Home-Apiary of H. C. Ahlers, West Bend, Wisconsin.



keepers asking questions. I will try and answer some of these questions at once. There is a limit to the amount of work that a man can do. I hire the necessary help to do practically all the work. I *direct* the work, look after the tools; keep the men supplied with the right sizes of nails, and examine every hive for leaks. Various sizes of screen and tacks are ready for emergency. I work four men on two rows of hives. They start at the same point. Each pair will try to do as much as the other. A fifth man does all the odd jobs, as directed.

PREPARING BEES FOR SHIPMENT.

I use a screen frame 16 x 20 inches on top and bottom. This screen frame has a $1\frac{1}{2}$ -inch-space under the bottom, and over the top edge of the hive. It allows the bees a lot of space to cluster. They will cluster mostly underneath the combs. The two stories are nailed together with four pieces of lath. The screen frames are nailed on and under with four, ten-penny nails. When the frames are not of the Hoffman pattern, or spaced nine-to-the-body, then thin strips, 16 inches long, are nailed with $\frac{1}{2}$ -inch nails to each frame.

Strips one inch square, and eight feet four inches long, are used to place between the hives in the car. (Stock car is warm enough.) Six hives are placed on the first tier. Two strips are nailed on, with a six-penny nail driven at each end through the screen frame. The second, and following tiers, contain only five hives each; equally spaced apart. This secures splendid ventilation to all hives. I use the regular ten-frame Dove-tailed hive. Nine hives can be placed end for end in each half of the car, and leave a little more than door space to hold the other accessories. Now, if the lower tier contains six hives, then the car will accomodate 288 hives, two-stories high. By placing two strips over the third tier, two more tiers of hive bodies, or boxes, with 60-pound cans, may be placed in the car. The empties should be on top. They shade the bees. This

keeps them more quiet. As the hot air always rises it keeps the bees cooler at the bottom.

Before moving anything to the car, I know exactly how many hives and packages I want to move. I figure out how high I must load. I finish loading each tier as I go along. If there are any hives of a different pattern, or size, I load them from the other end.

When all the bees and empties are loaded, I proceed to brace both ends. Take two six-inch planks, the exact length of the width of the inside of the car. Place one piece against the first and second tiers. Nail with twelve-penny nails through the side of the car into the ends. Then reinforce the brace by nailing a piece 1 x 4 inches, two feet long, tight against it. Don't save nails. Place the second strip so as to hold the lower edge of the upper tier of bees in the same manner. Barricade the other end the same way. Now fit a plank tight from center of lower brace to the center of the other lower brace. Toe-nail well. Counterbrace the two upper braces in the same manner. If the hives have been well packed, nothing short of a wreck will injure the bees. Fresh combs, not wired, spaced wide, with much honey in, may break down. A few in each hive do little damage. When packed in this manner, in a stock car, no watering is needed.

The bees were shipped to Illinois in a stock car. Then again to Louisiana. In Illinois the bottom screens were used as a bottom during the honey flow. The screen was partly pried down at one end. The entrance was spaced with a clam shell.

I had a great many inner covers sawed, while in Louisiana last spring, from cypress. They are 16 x 20 inches, in two pieces. They are used as combination cover or bottom. A rim has been nailed on one side. When placed with this side down it is used as a cover. On the other side only the two sides and one end have a rim. This side is used as a bottom. All the extra ones are

used to nail up the extra boxes with empty combs. When these hives are put to use, or sooner, each hive gets an extra cover. This makes it a ventilated cover; which is very important, since it is always warm or hot where the bees are. The cover is always ready to be used as a bottom for nucleus, and the extra cover can be placed on top. The combination avoids the handling of the bulky bottoms and covers, and saves much space in the car. I use a burlap cloth over the combs during a dearth of honey.

The bees bought in the South are a mixture—black blood predominating. With their young queens, they have compared well with my Italian apiary. I much prefer this mixed breed to the five banded stock, and to the blacks in Wisconsin. All things being equal, I think my three-banded Italians are superior. I have marked a few hives of my best honey gatherers, and will requeen every colony from this stock in April. In the South is the right place to requeen every colony, every spring.

WHAT BEES COST IN THE SOUTH.

Bees can be bought in the South in the spring from one to five dollars per hive. Usually two or three dollars are asked for bees on movable combs, in dilapidated hives. I would not advise to transfer old combs from box hives. I have found that this discourages most colonies. Put the bees on combs or full sheets of foundation, on the plan as given in E. D. Townsend's book. If one is handy with the saw, and wants to economize, hives can be made very cheaply from cypress lumber. First, common boards can be bought for \$25.00 per 1000 feet, double-dressed. Frames should be secured from a supply dealer.

COST OF TRANSPORTATION.

The freight on the car of bees from Kenner, Louisiana to West Bend, Wisconsin, was \$146.00. From West Bend, to Illinois river, \$80.00. From there back to Kenner, \$108.00. The rate is third class north of the Ohio river, and

fourth class south of the Ohio. Minimum weight, 20,000 pounds. Attendant must accompany car, and should pay first class fare. I was allowed free transportation on the Wabash railway after signing a contract.

My large and growing honey business takes up all of my time in the office, when I am not on the road with some bees. I am compelled to hire lots of help. I have not one expert apiarist. I pay from \$25.00 to \$28.00 per month, good room, and board, to green hands, and teach them enough to do my work; or teach them enough to work some where else. In Illinois I paid twenty cents per hour and secured good, inexperienced help. In Louisiana I pay a dollar per day for colored laborers. They board themselves. The white assistants have some experience and get more pay.

SHIPPING BEES SOUTH IN THE WINTER.

Jan. 17th, I expect to ship South another car of bees—237 colonies. These bees are all I have left in the cold North. They are all ready for immediate shipment. They were closed in Nov. 18th. Screen frame on top. Inner cover under bottom, nailed with four six-penny, cement coated box-nails. In single hives They were placed in my large cement bee cellar. Two windows and a door are open. A ten-inch ventilator was put in the northeast corner of cellar this fall. The bees are fairly quiet in their confinement. They will be shipped in a good grain car, with the ventilator left partly open at each end.

A half-interest has been sold in one car of bees. This car will be taken to the northern peninsula in Michigan the latter part of May. This is a money making venture. The spot has been selected. The location should yield a bumper crop of raspberry, basswood and fireweed honey. The hives and combs will be bought by advertising. The bees will be dequeened in July, all cells removed ten days later. The honey will be extracted as it becomes sufficiently ripe. At the end of the season every

drop of honey will be taken and the combs piled away for another season.

To successfully winter or run your chances to winter a colony of bees, will require very much more than fifty pounds of honey, from July 15th, till June 10th, the next season. It will take less than forty pounds of honey to place a good colony of bees on those combs again in June, from the South.

Another car of bees will be shipped to West Bend, and one to Jackson, Wisconsin. These 600 colonies will be run for clover and basswood honey. At the close of the harvest they will be taken at once to Illinois again.

I predict that there will be a time when the shipping of bees from the South to the North in the spring will be practiced *very extensively*.

A man owning two or three carloads of bees, or more, in the North can select one carload having his choicest queens, and ship them South in the fall, increase them 300 per cent., and know that every colony is strong when he ships them back in the spring. All old queens should be replaced with choice young ones, which cost little to raise when making increase. The balance of the apiaries should be dequeened at the proper time, and *all the honey taken*. It will be easy to produce a large crop of honey with all young queens, and an unlimited number of combs.

It is necessary to have at least three sets of combs for every colony, to make a success with bees. If you find two sets enough for you, there is something wrong with your bees, or your locality. You can't make a change too quickly.

WEST BEND, Wis., Dec. 28, 1910.

[Since the foregoing was put in type the following letter has come to hand from friend Ahlers.—EDITOR.]

SAINT ROSE, La., Feb. 8, 1911.
Friend Hutchinson:—

We have rigged up four beds, writing table, reading table, dining table, and very numerous chairs (60-pound can boxes.)

We live up stairs in an old plantation house. Front gallery—view on Mississippi river. Rear gallery—view of three-fourths of apiary. Back ground—ancient pecan trees (15) four feet thick, with a ton or more of Spanish moss on each tree. I must have some photos. made if I can get them before I leave. The lower story is used for a warehouse and extracting room. The workshop is under a wide gallery, on the north side of the building. Have already nailed and wired 3,000 frames. Bees are getting lots of pollen, and enough honey to supply daily needs. The season is unusually early and warm. Today, while you are freezing, the thermometer reads 75 degrees at 11:30 a. m. After a light rain, it is very sultry. I am splendidly located and can live reasonably cheap. Have a good general store one mile away and the merchant is very accomodating, and delivers all our provisions.

Everything is working according to schedule, with the exception that many of my colonies were very much weakened while being closed in, and in my cement cellar from November. [It is very seldom that bees can be fastened in and not suffer while in the cellar. I think Mr. Ahlers would have been the gainer not to have fastened them in until the time came for shipment.—EDITOR.] Some were dead when loading. But all colonies were so thoroughly shaken, that the energy derived therefrom will make up the loss in short order.

The hives were opened here 16 days ago. Some colonies now have brood in seven combs. Almost every colony has young bees hatching from the centre of capped brood. The queens are laying beautifully and regularly. I am looking for a small crop of honey here this season, yet I may be agreeably surprised. But, I'll have the *bees*, of the *right age*, *right number*, at the *right time*, and at the *right places* for the rest of the season.

Sincerely yours,

H. C. AHLERS.

A Simple Method of Using dry Heat to Liquefy Honey in Tumblers or Jars.

LEON C. WHEELER.



MOST of my customers who handle honey in tumblers and jars do not have good sale for candied honey. As I supply most of them regularly, I

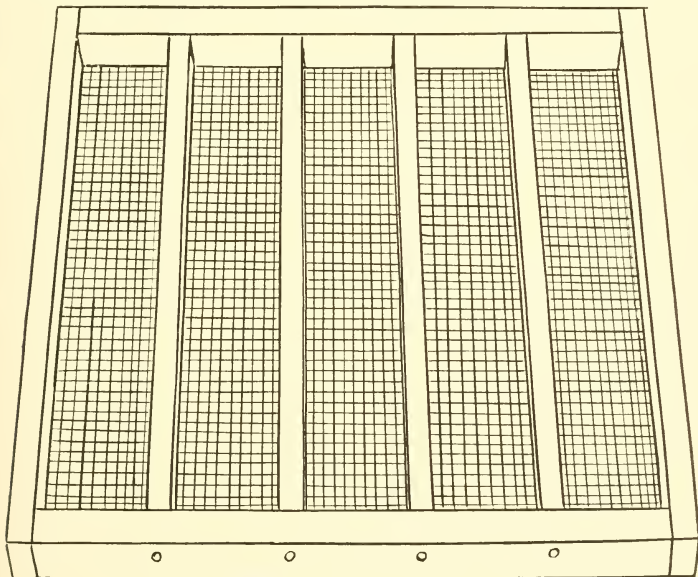
find it to my advantage, as well as theirs, to take the candied honey off their hands

candied honey on my hands this year; much more than usual.

WATER SPOILS THE LABELS.

Previous to this year I have used a shallow pan with just enough water to nearly submerge the tumblers when set into it. Something had to be put under the tumblers to make an air-space between them and the bottom of the pan to keep the honey from scorching or the glass from breaking.

The labels would loosen and come off, and, altogether, it was a slow puttering job, and rather an expensive one if a



Tray for Holding Tumblers when Liquefying the Contents.

and give them honey not candied. This man counted his time and the extra practice has left me with quite a lot of labels.

This winter all this is changed; and, instead of my labels coming off and having to be replaced, every one is in as good condition when taken out as when put in; and where I fooled away a half day getting a few dozen liquefied by the old method, I can now liquefy at the rate of six dozen an hour. This on a small, four-hole No 8 stove. On a fair sized range this could be doubled.

My apparatus consists simply of a wooden tray with wire cloth bottom and divided into spaces just wide enough to hold a row of one-pound jars. I use the narrow spaces because a wider space will allow the wire cloth to sag and tip up the tumblers or jars. The wire cloth I am using is the galvanized wire, with one-fourth inch mesh; but, no doubt the ordinary painted wire cloth would serve the purpose fully as well.

A couple of short pieces of gas pipe are laid on the stove, and these raise the

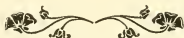
tray about an inch when it is placed thereon.

It is best to nail strips of tin over the wood where it comes nearest the heat to keep it from burning, although a heat sufficient to ignite the wood is rather more than is best for liquefying the honey.

HAVE A CAUTION, HAVE A CARE.

And now a word of caution: Don't go away and leave it to take care of itself, for, if you do, you'll find on your return, that some of your honey is boiling over, and a bad mess is on the stove, and some spoiled honey is the result. Keep watch; and as soon as the honey is clear in a jar, remove it, and replace it with another. Remember, a very short boiling will spoil both the color and the flavor, and it will boil much sooner than you think.

BARRYTON, Mich., Jan. 10, 1911.



Handling More Bees in Producing Comb Honey Than in Raising Extracted.

M. A. GILL.



EDITOR Review:— You have asked me to make a comparison of the advantages and disadvantages in the production of comb and extracted honey. First, I will say that, as

I have not worked any for extracted honey in the past ten years, I realize I have gone behind in *that* branch of the business, but I feel that I have advanced some in the handling of bees in large numbers in the production of comb honey.

I realize what a breeze I will start around my ears when I say that I can handle *more* bees, with two helpers, when working for comb honey, than I can for extracted.

Of course, the extracting man will come back with the bug-bear of "swarming;" and, while some of it is true, it's not the bug-bear that many think; as I have had scarcely a prime swarm in the air for ten years; and have handled from five to fourteen hundred colonies during that period. Of course, an occasional after-swarm, or an August swarm, will come out, but not enough to make any account of.

Before speaking of the methods for controlling swarming, I will say it is amusing to read from some quite wise

writers who say that any "fussing" or fixing of swarms, otherwise than natural swarming, is worse than nothing. I say to myself, "surely most of their time is spent swinging in a hammock watching a few colonies, or a few hundred at least, and not in the busy whirl of swarming with say, a thousand colonies, scattered over the country, with from ten to twenty per cent. of them wanting to swarm every week, for, perhaps, four weeks."

The extracted honey man is not idle at this time; for, he, too, is busy in equalizing brood, controlling swarms, giving room, etc.

TO WHAT EXTENT THE HANDLING OF HIVES INSTEAD OF FRAMES IS PRACTICAL.

Here we are confronted by another class of bee keepers (and usually they are producing honey by the wheel barrow load instead of by the car load) who say if a man is to handle bees extensively he must handle hives instead of combs; and I want to compromise with those parties right here by admitting that we must learn to handle *hives* by one *cursory glance*, when a rush of work is on, and not spend much valuable time handling over combs looking for queen cells that do not exist, nor in counting frames of brood, unless to note its age, for the per cent. of hatching brood has much to with the swarming impulse just prior to honey flows.

The methods by which we learn to handle a large per cent. of colonies during the swarming by handling hives instead of combs (and by this I do not mean *sectional* hives) are so many that if I should try to describe them the reader would no doubt say as I have said after reading Quinby, Langstroth, Miller, Doolittle and others: "well, I can read their experience, but before I can realize it, I must endure the work, and grind, and torture that they have endured."

SHOOK-SWARMING A SUCCESS.

I will not discuss methods here, but will say that shook-swarming is a suc-

cess, if properly done, in working for comb honey. I know many imitators say it is not a success; others say it is too much work; still others say their bees swarmed after shaking them, even worse than before; but I am *sure* that they are *wrong*, either in their methods or practice, as I have never had anyone watching my bees an hour; never had more than two helpers; and have not had a prime swarm in the air during the past ten years; and, surely, no extracting-man could do any better or more work; and, with swarming out of the way, I feel sure I could leave my extracting brother behind. With a warehouse filled with prepared supers I can give all the room needed for a honey flow, while most extracting men must extract to give more room during a heavy flow; and I know that I can take off more honey in a day than can my extracting brother, but I admit the comb honey must still be cleaned and cased afterwards.

COMB HONEY PRODUCTION LEAVES THE COLONIES IN BETTER CONDITION FOR WINTER.

When the last super is off, my bees are in better winter condition than his, either for indoor or outdoor wintering; and, as a rule, will care for themselves a month later than his the next spring.

COMB HONEY LIKELY TO BE HIGHER IN PRICE.

The stampede to extracted honey is something I like to see; for, while our product now brings a better price and quicker sale, the difference will be greater in the near future, as it should be, because comb honey in the future, as in the past, will be a luxury, and the luxuries are what bring the most money. I, myself, will sell my comb honey to be used as a luxury, and will buy good extracted honey as an article of food; keeping a few sections for company and Thanksgiving dinner.

I run my bees for comb honey because I can keep more bees by so doing, as there is something about a colony of bees so run that it is capable of running itself, except during swarming time, and then

it's *capable* of running itself and you, too. I confess I rather like that ability in the bees, and am not looking for, nor expecting, a non-swarming race under all circumstances; but am willing to pay the price for the reward I feel sure will come when a colony gets into swarming condition.

Now, without wishing to be vindictive, I will say that the production of comb honey is no business for the slouch nor the laggard; but there never was a better time for the comb honey man who has a good equipment and location to "stand pat" than today.

LONGMONT, Colo., Jan. 14, 1911.



EDITORIAL

A Monthly Index in the Review has been voted down by an overwhelming majority—the readers prefer that the space be used for other reading matter.

Pennsylvania Bee Keepers, if they wish to have their foul brood bill pass, should lose no time in writing their representative, in the legislature. Unless they do this, nothing can be hoped for.

Canadian subscribers, in renewing their subscriptions will please send \$1.10; foreign subscribers, except those in Mexico, Cuba, Hayti, Hawaii and the Philippines will please send \$1.24.

Advanced Bee Culture has been delayed in its printing, but will probably be ready for delivery about the time that this issue of the Review reaches its readers. Price \$1.00; Review and book, \$1.90.

Congratulations are extended by the Review to its old friend and correspondent, E. F. Atwater, and his bride, who, on St. Valentine's day, changed the name of Fay Gwendolyn Nesbitt to that of Mrs. Atwater.

A Correction: In February Review, page 55, bottom of first column, it ought to read: "But I tell you that a good periodical, *containing the information* wanted tomorrow, or very soon, will be read, etc." The *Italicized* words were left out.

D. A. Jones, once the most extensive bee keeper of Canada, manufacturer of bee supplies, founder of the Canadian Bee Journal, and importer and breeder of foreign varieties of bees, passed away at his home in Beeton, on the 20th of last November, aged 75 years. He was kind hearted, of a genial, jovial disposition, and very popular with his fellow men.

Check Raising is so easy of accomplishment, and to some the temptation so great, that the only wonder is that there are not more losses than there are from this source. Suppose you give a check for Eight (\$8.00) Dollars, how easy to add a "y" to the word "eight," move over the decimal point one place and add another cipher, and lo! we have a check for eighty dollars. To send out checks without some kind of protection, is almost criminal carelessness. The best kind of protection that I know of is that afforded by the use of such a machine as the Defiance Check Protector, advertised in this issue. It is the lowest priced of any really good protector with which I am acquainted.

A Cellar with cement walls, and a cement bottom, has in several instances wintered bees successfully even when the number was large, but I notice, in each instance reported, that there has been *abundant ventilation*.

For instance, Mr. Frank Coverdale, of Delmar, Iowa, writes me that he has 214 colonies in a cellar with cement walls and

bottom, and they are wintering perfectly. He then goes on to explain how thorough and complete is his system of ventilation. In closing he says: "I wintered bees with perfect success in this cellar for 25 years with no other attention than simply carrying them in and out, but in those days the walls were of stone and brick, and the floor of earth. Since it has been tightly cemented on the sides and bottom, an entirely different system of management is necessary, in that we must see that the bees have a great abundance of fresh air from the outside—i' this is done the bees will come through all right."

The above tells in substance what has come to me from several sources.

An Apicultural Dream Coming True.

Migratory bee keeping, moving from South to North to gather succeeding harvests afforded by the advancing seasons, has, for many years, been one bright, apicultural dream. Steaming up the Missississippi with an apiary on board, running nights and tying up daytimes, proved a dismal failure. Shipping bees North by rail has been looked upon as too risky. Success could not be hoped for in less than car load lots. Transportation has been the one stumbling block to success. However, methods of packing and care in transportation have been greatly improved, while faster lines of through freight have been established, and these factors have at last enabled Mr. H. C. Ahlers to score a notable success in a genuine migratory scheme on a scale large enough to make \$4,000 in a single season. How the reading of his article made my blood tingle! How I would love to go South; buy a car load of bees; reap a harvest; load and ship to the North; reap another harvest, then hie away to the South again for winter; or as Mr. Ahlers proposes doing, remove queens at the proper time, and extract *all honey* at the end of the flow; buying bees again the next spring in the South. I see a great future in store for this kind

of migratory bee keeper in the hands of men who have the nerve and enterprise necessary for success.

A Beginners' Department not Wanted in the Review.

No subject has ever been touched upon in the Review that so roused its readers, as the proposal to start a department for beginners. The letters and postals came in by the handfuls. About one in ten favored the establishing of such a department, but the other nine were most emphatic in their protests against such a change. "Keep the Review as it is;" "let's have one bee journal that doesn't waste space on beginners;" "let the beginner learn his A B C's out of a text book the same as I did;" these are fair samples of the replies. One man said he had stopped taking one journal because of the ceaseless repetition of the same questions and answers. Certainly. What else could you expect? Each beginner will ask the same questions; and this will go on month after month, and year after year—over, and over, and over again will the same questions be asked and answered. I have always felt, and still believe, and it seems that an overwhelming majority of my readers agree with me, that the discussion of elementary questions in a bee journal is a waste of space.

Please don't confuse a beginners' department with the answering of queries. All questions of general interest will be welcomed and answered to the best of my ability. For instance, I last month answered a string of questions from Mr. Laing; and next month I expect to answer another list from Mr. Swanson.

The Advantages of Specialty.

I can remember with what enthusiasm I read, years ago, Mr. Terry's account of his wonderful success in making a specialty of potato growing. He certainly considered some very fine points. For instance, he had his fields laid out very *long* and narrow, and had the rows

run the long way of the fields, that he might save time in turning around when cultivating. This might seem like a small matter, but when a man cultivates almost continuously from the time the potatoes show in the rows, until the vines are ready to cover the ground, it becomes an important factor. The potatoes are picked up into bushel crates, hauled to market or stored in the cellar in the same crates—never handled singly but *once*. A three-horse team was used to haul them to market, because a larger load in proportion to the team-power could thus be hauled—only one wagon to haul, yet one-half could be added to the load. Great pains were taken by crop rotation and tillage to put the soil in the best possible condition, and a potato planter and other improved machinery employed. All branches of farming were dropped except as they had a bearing upon the potato business. Not a hen, nor hog, nor cow were kept. Considerable attention was paid to supply the early markets when prices were high. Usually a load was contracted for in advance, by means of the telephone, thus no time was wasted in driving aimlessly about the city.

All this is brought to my mind by reading an article in a recent issue of the Farmer, of St. Paul, Minn., in which is described the success of a Mr. Gilbertson in making a specialty of growing onions. For ten years his average income, from 40 acres, has been over \$15,000 a year. Years ago, when he first began to grow onions, they cost him 35 cts. per bushel; specialty and improved methods have enabled him to reduce the cost to only nine cents! To illustrate: Seed was a large item of cost, and all seeders sowed too much seed, necessitating thinning by hand at a cost of from \$25.00 to \$40.00 per acre. Mr. Gilbertson invented and patented a seeder that would drop only one seed at a time, and place the seeds any desired distance apart, thus eliminating entirely the cost of thinning. By selection, a strain

of onions was bred up that possessed unusual keeping qualities.

There is not room here to mention all of the methods whereby specialty and science enabled this man to attain such astonishing results, but we all know that no such profits could ever be secured by the old fashioned mixed farming.

In the face of such examples as this it seems strange to me that any one can be found trying to discourage specialty, let it be bee keeping, or whatever it may.

Encourage the Boys to Make Money Trapping.

Some of the happiest days of my life were when, as a boy, I trapped for mink, muskrats, foxes, coon, and other fur-bearing animals. The country was new, and game plentiful. There was a good sized stream, the Butternut creek, that flowed near our house, and, in the fall I had a "line" of traps for miles up and down this creek, and on the millponds made by damming the stream. I began making "deadfalls" when only 11 years old, and I remember that I trapped a whole month before I caught anything. My traps were sprung repeatedly, and the baits taken, but, for some reason, the animals eluded capture. Finally, one morning, I found a muskrat caught by the *tail*. If ever in my whole life there was a moment of wild, exultant joy, it was when I saw that rat in my trap. I ran every step of the way home; and, as I approached the house, I held up the trap by the tail and shouted: "I've got a rat!" "I've got a rat."

The manner of this rat's capture showed me my mistake. My "deadfalls" were too large. The rat went clear inside the trap, away beyond the deadly "fall," hence was not caught. He got the bait and then turned around and went out. I went at it and rebuilt all of my traps, and was soon bringing home game every few days.

I continued trapping each fall for several years, and usually was quite successful. I remember, the fall when I

was 14, I sold \$25 00 worth of fur. To me it seemed a small fortune, \$2,500 would seem no larger to me now.

Oh, the happiness of those days! When, with gun over my shoulder, I tramped over the rustling carpet of leaves under foot, listened to the chatter of squirrels as they gathered their store of nuts for winter, when I feasted on bunches of purple wild grapes, or crimson wild plums, coming home in the gloaming, or possibly by moonlight, with a partridge or squirrel in my sack, and a mind as free from care as the wind that blows.

From my experience I might write quite an instructive book on trapping; but it isn't necessary, as others have already performed the task; in fact there is a montly magazine called *The Hunter, Trader, Trapper*. It is brimful of instruction how to catch all kinds of fur bearing animals, trapping and hunting stories, and the like. I read it because it brings back so vividly those happy days of my boyhood.

The magazine is \$1.00 a year, and published at Columbus, Ohio. I will club it and the Review one year for \$1.90.

Of course, all this has nothing to do with bee keeping, but I know that many of my readers have boys who might earn quite a little money trapping, if they were reminded of it, and given the proper instructions, and my heart is full of sympathy and comradeship for those boys.

Of course, there are some parts of the country where there are no fur-bearing animals to catch, but you would be surprised at some of the large "catches," reported in *Hunter, Trader, Trapper*, as being made even quite near to large cities.

—*—

Selling Dark Honey for as much as White.

A good friend and subscriber of mine in Northern Michigan takes me to task for offering my buckwheat-willow herb at a lower price than the straight, water-white willow herb. He says that when living in Missouri he sold the darker Spanish needle honey in competition with

white honey, getting the same price for both. In Northern Michigan he has buckwheat honey, the willow herb and raspberry, and he sells all at the same price, viz., ten cents. He says we are foolish to offer our dark honey at a lower price; that it is worth just as much as the lighter colored honies, and consumers would never think of paying any less for it, if we did not put it into their heads. He says we should put the different varieties of honey before them, saying: "Here is clover, buckwheat and goldenrod; all the same price. Taste and take your choice." Don't praise one kind, nor "run down" another, simply let the customer choose. Do this, says my friend, and you will be surprised at the large number who choose the darker, stronger flavored honies. There is much truth and good sense in these views, and where a bee keeper can meet his customers personally they might be put into practice.

It might be asked how came white honey to be sold at a higher price? I expect it is because the demand for it is greater than for dark, strong honey.

—*—

Subjects to be Discussed in the Review.

A month or two ago I asked my readers to let me know what subjects they would like discussed in the Review. Here are some of the topics mentioned.

Do bees deteriorate as workers when taken to a southern climate?

Shall weak colonies be united early in the spring?

Is it advisable to use queen excluders when producing extracted honey?

What steps are necessary to secure improvement of stock. Would like to hear from F. B. Simpson and Geo. B. Howe.

How far will bees fly and store honey at a profit?

How best to control swarming and increase when working for comb honey.

How can unfinished sections be disposed of to the best advantage?

What is the best method of removing honey from the combs of unfinished

sections, that they may be used as "bait" sections the next spring?

Is there a profitable method of feeding to secure the drawing out of foundation in sections in advance of the season?

Give the best method of feeding to secure the completion of unfinished sections at the end of the season.

How best to fasten sheets of foundation into shallow frames that have been used once for chunk honey, and the groove is filled with wax.

How best to make a living from bees alone. Would like to hear from Dr. Miller and Mr. Doolittle.

Would like an article on queen rearing from Mr. Geo. B. Howe.

Give details of the Pratt method of queen rearing.

What is the best method of transferring bees from box hives to standard hives? Would like to hear from Townsend?

Is there any practical way of cleaning propolis off sections, aside from scraping it off with a knife?

What are the merits of the golden Italian bees, as compared with the dark or leather-colored Italians?

What are the advantages of the divisible brood chamber hive?

If a queen is reared, fertilized and begins laying in an upper story over an excluder, what are the prospects of her superseding the old queen if she and the bees are shaken down in front of the entrance?

What is the best method of fastening foundation into sections?

What is the best method of securing rapid increase?

Would like an article from Aaron Coppin on his comb honey production.

Describe the Betsinger case and separator for comb honey.

What is the best method of straining the unusually thick honey produced in the West?

What is the best method of furnishing a substitute for pollen where one is needed?

How long before the honey flow ought our queens to be doing their best, and how near the end of the harvest ought we begin to discourage breeding? Would like to hear from J. E. Crane.

Of what does the "ripening" of honey consist?

What would give to bee keeping the greatest impetus?

What is the best method of securing drawn combs for use in extracting supers?

Has stimulative feeding a tendency to make "lazy" bees out of "busy" bees?

What is the most practical way of building up colonies for the white clover harvest? Would like to hear from Townsend.

What is the best method of introducing a queen in the shortest possible time?

Are cappings melters a practical success?

What is the best method of building up weak colonies in time for the honey harvest?

Here are 34 topics upon which subscribers would like information. If any reader can give it, upon one or a dozen of the subjects mentioned, let him not be backward. I will pay for such articles as are used.



The Importance of Renewing Subscriptions Promptly.

The Review is nearly 25 years old, and I believe that, in all this time, I have never "dunned" my subscribers through its columns, nor so much as referred to the matter of delinquent subscriptions. Probably I shall never again refer to the matter, but, just now, I have been going through the list, and sending out "reminders" to those in arrears, and I have been so impressed with the number of those who are from one to two years behind, that I feel as though I must free my mind. Not many are two years in arrears, but a very large number are over a year behind, and a still larger number are several months in arrears.

Perhaps somebody, yes, several "some-

bodies," will ask: "Why don't you stop sending the Review when subscriptions expire, then you won't have these delinquents?" I tried that plan once, for three years, and lost many friends and subscribers. Whether publishers like it or not, the public likes to have its periodicals "keep right on coming," and pay when it gets good and ready.

I have never knowingly kept on sending the Review to a man who did not want it. A large proportion of these men who are in arrears have taken the Review for years, some of them from its very infancy, and probably will keep on taking it to the end of their lives, and yet—they are sometimes very slow in paying up. I expect that this comes about largely because the importance of the matter does not appeal to them. "It's only a dollar or two dollars—that doesn't count much." Yes, my friend, but when there are a thousand or more other fellows thinking *exactly the same thing*, it becomes very important to the publisher.

The lack of money is not always the cause of this dilatoriness. I am personally acquainted with many of the men who often allow their subscriptions to fall far behind, that are worth many times as much property as I possess. As nearly as I can judge, the amount of a man's wealth has little bearing upon the promptness with which he pays his subscription to the bee journals. If I should meet a delinquent subscriber tomorrow, I expect that about the first thing he would do would be to thrust his hand in his pocket and pull out a dollar or two dollars, and say, "I guess this is due on the Review." If I could meet *all* of my delinquent subscribers, I presume three-fourths of them would do this very thing. But to write a letter, to buy a money order, etc., requires an *effort*, and it is put off until some more convenient time.

When a man is poor, or had "hard luck," no one knows with what pleasure I keep on sending his Review, and wait

for my pay until the tide turns, or he secures another honey crop, but when a man has the money and could pay me just as well as not, yet neglects it and makes me wait months, even years, I feel that it is unfair.

The friendship of a subscriber is very pleasant, the items of information that he sends in are of great help, the kind, cheering letters that he writes are very encouraging, but fully as important as all of these is the letter that he sends, beginning: "Enclosed please find." If you really and truly love a journal, and wish to see it prosper, above all things don't allow your subscription to lag months and months behind.



Learn to Multiply your Powers by Delegating Work to Others.

Many men seem to be unable to recognize the time when they reach that point in their career that help can be profitably employed. They cling to the idea that they must do everything with their own hands—they can't trust their work to others. I can remember the time when I was a young man, and just starting for myself, that I never hired anything done that I could do myself; nor bought anything that I could make myself; and, under the circumstances that was probably a wise policy. I had all of the time there was and that was about all I did have. Money was a very scarce article and was saved in every possible way. My business has now developed to such an extent that I could not do one-tenth of it with my own hands, and have learned that the best motto for me to follow at present is: "Don't do any thing that you can hire done."

It is decidedly poor policy for the manager of any business to employ his own hands in carrying out details. His time ought to be spent in thinking, and planning, and managing. In going into a job printing office I once found the proprietor busy putting wire loops into the eyelets of a lot of shipping tags that had been printed for some customer. I

had hard work to hold my tongue. I wanted to say: "Why in the world don't you turn that job over to some boy, and you go out and call on customers, or prospective customers, and talk with them about the importance of neat, even handsome, stationery. Tell them that it doesn't so much matter what *they* think about their stationery as what the man thinks *who gets it*. What impression does it make upon him? Then show samples of work and really *help* customers to get up something away ahead of anything they have ever used. The proprietor of an ordinary job printing office should spend *his* time in thus *looking after business*.

My sickness of the past few months has not been without its lessons, and one

of them is that I spend more time in thinking and planning and less in working. I couldn't work, and I couldn't help thinking, so I lay on my cot and hatched out schemes for improving the Review and increasing its circulation. If I had been at work I should have been too busy to think of these things. It was a most concrete object-lesson to me.

The bee keeper who is spreading out, and "keeping more bees," ought not to attempt to do all of the work himself. Nailing up hives, painting hives, nailing up frames, wiring them, putting in foundation, putting together sections, extracting honey, cleaning and crating section honey, etc., can all be delegated to others, while the manager manages, oversees and plans.

Selected Articles.

AND EDITORIAL COMMENTS.

HONEY-STORING CAPABILITIES.

Some Reasons why one Colony Stores
More Surplus than Another, Although
not so Populous.

The first year that I started with bees, I had four colonies. Three were of ordinary strength in the early spring—one considerably weaker. When clover opened in June, all were about of equal strength, but the weaker colony that had just reached its "majority" so to speak, stored twice the surplus of any of the other colonies.

Several years later, when my brother Elmer was with me, I remember one colony in particular, when taking the bees from the cellar one spring. I think it was the most populous of any colony that I ever saw brought out of a cellar. It seemed jammed full of bees from top to bottom, and from front to rear. I

considered it so much of a sight that I went to the house and invited my wife to come down to the apiary and see it. I remember that we all stood around this colony, arms akimbo, and indulged in remarks regarding what might be expected of such a colony. When the harvest was over I found that it had *fallen far below the average*, while one other colony that had shown no special or unusual signs of prosperity, had stored *double* the average.

Shakespeare says: "There is a tide in the affairs of men, which, taken at its flood, leads on to fortune." It's the same with a colony of bees. At some period in the life-history of a colony from early spring to the end of the season, there comes a time, a "flood," when that colony is in the best possible condition to store surplus. If this flood comes at the same time as the best honey flow, then we secure a bumper crop. If it comes too

soon, or too late, the surplus gathered will be meager. In the ability to bring the greatest number of his colonies into this condition at the opening of the harvest, lies the highest skill of which a bee keeper can boast.

The question naturally arises, how shall we know this condition? What are its factors? How may they be secured? I never saw this whole question more thoroughly covered than in an article by that eminent German bee master, C. J. H. Grovenhorst, and published in the Review nearly 20 years ago. Considering that the Review now has ten readers where it then had one, and the importance of thoroughly understanding this basic principle of profitable bee keeping, I feel justified in reproducing the article. It is as follows:

"There are not many attentive bee keepers of long experience who have not noticed that in so-called poor seasons one or more of their colonies not only stored enough honey for its own use but perhaps even a surplus; while the majority of colonies may not have secured even sufficient for their winter stores. Likewise, in a good season it must have been noticed that some colonies give an astonishing surplus in comparison with others.

These results are more striking if all the colonies had access to the same pasture, and if the work was carried on under seemingly exactly the same conditions as regards combs, hives, strength of colonies, etc.

Even in the beginning of my business as a practical bee keeper, it often happened in a poor season that three or four of my colonies in the round straw hives with no frames had more than enough for winter, while the majority, often stronger in bees, had not sufficient for winter. Then in a good honey flow I often observed that some of the small colonies went far ahead of the stronger ones. I have had four-frame nuclei give me from ten to twenty pounds of extracted honey in a season, while others of the same strength, and stronger ones, gave me scarcely as much. Still more remarkable seemed that small queen rearing colonies that had in the aggregate not more comb than one full sized frame, little by little at a time, would finally yield five or six pounds, or more, of honey, while others in apparently the same condition gathered only their daily

supply. In the face of all this, the assertion is frequently heard that only strong colonies yield a surplus!

When such results come about with the colonies, comb, hives and pasturage apparently the same, there must be other factors not so easily discovered. By repeated examination and observation I have learned that there exists a certain condition under which a colony will gather the most honey whether it be strong or weak. If this condition has not yet been reached, or if it has been passed, the storing of surplus will be neglected or at least carried on only moderately.

That being the case, the question naturally arises, what is this condition? By an exact examination there will be found five central points. Three of these are well known to first class bee keepers, and they are mentioned only that I may be able to give a complete statement, and in my second part be able to refer to them if desirable.

1. The ideal colony must have a faultless queen: hardy, sound of body, and, above all things, fertile, and her progeny distinguished by diligence.

2. Nevertheless, such a queen alone does not make an ideal colony. At the right time, that is, when honey is coming in freely there must be plenty of empty comb that no time nor honey be lost in building comb.

3. Our ideal colony must swarm at the right time or not at all. It swarms at the right time when it swarms so early that the queens of the after-swarm, if such are allowed, become fertile, and the first or prime swarm has its combs completed, before the opening of the main harvest.

4. The ideal colony must not be over-populous. A hive is over-populous when its working force is too great in comparison to the dimensions of the hive and to the number of wax building bees.

Such a condition is intolerable to the bees and they try to help themselves by loafing. Their instinct teaches them to begin this loafing even before the hive is over-populous. The bees seem to see that the combs are filled and capped, that bees are daily hatching, and that they will soon be crowded. A colony in such a condition will never perform the wonders in gathering honey that we may expect from one less populous. Such a colony feels instinctively that its abode will soon be too small, and the swarming fever sets in, and we all know that when that is awakened the bees will continue to loaf. At the most, only as much honey will be gathered as is needed for mak-

ing the swarming preparations. A colony with the swarming fever is of little value as a honey gatherer.

5. The best honey gathering colonies are not kept at home during the best honey flow by the nursing of too much brood. If there is too much brood in proportion to the working force, most of the honey gathered will be consumed by the brood. The bee keeper whose bees rear a large amount of brood during the main honey harvest, or near its close, will find, as he stands before his colonies at the close of the harvest, that although they are strong in bees and the combs faultless, the latter will be *empty* and will *stay* so.

A queen may be faultless in the fall, and fail in the spring. To discover this failure early in the spring and give the colony another queen is all-important. To introduce a queen with no danger of loss, remove the poor queen and all of the combs, giving the latter to some colony that can care for them temporarily. Allow the bees three or four frames with starters only. Give them the new queen in a cage. Watch closely and see what kind of comb they build. If it is drone comb they will not accept the queen. Cut it out and let them start again. If no honey is coming in they must be fed. When they begin building worker comb it is a sign that they have accepted the queen and it is safe to release her. The second day after her release three or four of the brood combs are returned. The remainder are given the next day. As a rule queens are not kept after the second year. If the colony with the newly given queen does not prove diligent, exchange three or four of its combs for the same number of combs of sealed brood taken from the most industrious colony in the yard.

The second point is that of supplying colonies with abundance of empty combs. When the bees build their own combs there is not only the loss of the honey that is consumed to furnish the wax for comb building, but the bees that are secreting the wax and building the combs could be gathering honey were they not thus employed. I have always worked with all my power to have on hand a sufficient supply of comb, but I must admit that I have sometimes wished that I had more. At such times I have would have given much if I could have gotten Warnstorf's combs, but his discovery is of recent date and I was obliged to use foundation, which is a great help, but not the equal of completed combs. (The Warnstorf combs, with full depth cells, cannot be used for raising comb honey

as they are twice as heavy as natural comb, but they are excellent, strong combs for use in extracting.)

The third point is that the bees swarm at the right time—that the mother colony has a fertile queen and the young colony has its brood combs completed before the main harvest comes. Colonies that make preparations for swarming at the height of the harvest, or towards its close, miss the best opportunity for honey gathering. A swarm that comes late can but build its combs and secure a store of honey for winter, while the parent colony will not become sufficiently populous until the harvest is past and gone. At the end of the season the bee keeper will stand before his colonies and complain of the average season, or, perhaps, the poor season. The only strange thing about it is that colonies "X" and "Z" have done all that could be wished. At least, they have gathered twice as much as the others. By close searching after the causes of these things the bee keeper will find that in nine cases out of ten, the colonies that are starving in the spring swarmed at the wrong time, while "X" and "Z" swarmed at the right time. If swarming at the wrong time is the cause of a small crop, then the bee keeper will not doubt a moment as to what he ought to do. The only point is how it shall be done. Of course, we want early swarms, not simply individual swarms, but we want the *whole* apiary to swarm early. To accomplish this, that is, have the whole apiary swarm early and within a period of a week or ten days, those colonies that are in the rear must be helped at the expense of those that are too far advanced. This is done by the exchange of combs. From the time the bees are wintered until the opening of the main harvest, I work with this end in view, that of having them all enter the field equally strong. During this preparatory period, many of them build combs. Of course, if colonies are too far in the rear it may be best to leave them to themselves or unite them. There are other means than exchanging combs for equalizing colonies but they must be practiced with great caution. If some of the colonies do not swarm when it seems they ought to, they can be divided. An artificial swarm that is made like a natural swarm and at the right time, will work with the same energy as a natural swarm, and in some conditions is to be preferred. To get early swarms the bees must have protection and an abundance of stores. In the province of Hanover, where bee keeping has been made a specialty for a few

hundred years, stimulative feeding is practiced, and it is only by this plan that an early and short swarming season can be secured. I use a swarm catcher and would not think of doing without one.

To remove the trouble from over-populousness we have only to have a hive that is large enough, or that can be made large enough, and see that it is enlarged before it really becomes too populous. If we have a hive that cannot be enlarged, then we must remove some of the sealed brood and give it to some colony that is not so populous. Managed in this way, the whole apiary will be in the best condition to take advantage of the honey flow when it comes, instead of having in it a few giants surrounded by dwarfs.

Lastly, is the point of having too much unsealed brood in proportion to the number of workers. To remedy this some of the unsealed brood is taken away and given to some colony having more bees in proportion to its unsealed brood. Empty combs are given in place of the brood removed. The empty combs are placed at the side of the brood nest. If there is danger of weakening the colony too much, capped brood may be given in place of the unsealed that is removed."

The practical conclusions are to know when to expect your harvest, and have your workers reared and ready for it when it comes; then so manage as to curtail breeding or turn the energies of your bees into honey gathering, instead of being dissipated by breeding and swarming. Fortunately, Italian bees are a great help in securing these results. They are inclined to rear large quantities of brood early in the season, but when the harvest arrives, they greatly slacken breeding and turn their energies to honey gathering. Spring protection, judicious feeding, Italian bees and proper manipulation are capable of turning a poor season into a good one.

Mexico as a Bee Country

B. A. Hadsell of Buckeye, Arizona, one of the largest bee keepers in the world, has made three trips to Mexico investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated pamphlet describing the tropics of Mexico as the Bee Man's Paradise, which he will mail free by addressing him.

3-11-tf

B. A. Hadsell, Lititz, Pa.

A NEW CREATION
WEBSTER'S
NEW
INTERNATIONAL
DICTIONARY

THE MERRIAM WEBSTER

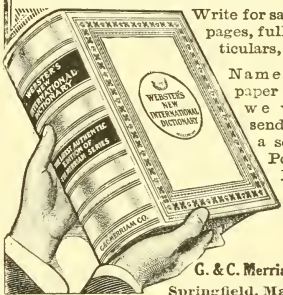
The *Only New* unabridged dictionary in many years.

Contains the *pith and essence* of an authoritative library. Covers every field of knowledge. An Encyclopedia in a single book.

The *Only* dictionary with the *New Divided Page*.

400,000 Words. 2700 Pages.
6000 Illustrations. Cost nearly half a million dollars.

Post yourself on this most remarkable single volume.



Write for sample pages, full particulars, etc.

Name this paper and we will send free a set of Pocket Maps

G. & C. Merriam Co.
Springfield, Mass.

Superior, Golden Italian

QUEENS

We have moved, and are now located only one-half mile from freight, express and post office. We have four mail trains daily which will enable us to fill orders for queens by return mail. We will rear for sale Superior, Golden Italians. Send for circular and price list

3-11-tf

T. S. HALL, Talking Rock, Pickens Co., Ga.

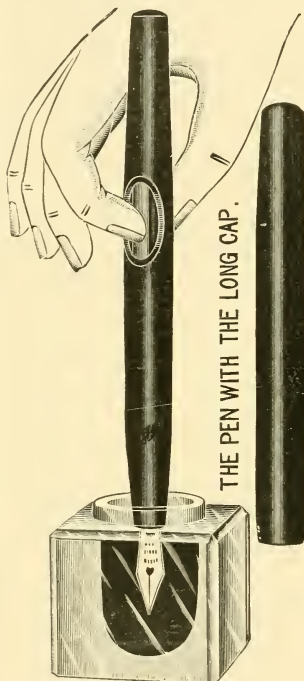
Choctawhatchie Queens

We offer for 1911 Golden Queens that will please. "No cure, no pay" our motto. Let us book your order now, that you may know the queens will be ready when wanted. Untested, 75c; three for \$2.00; ten for \$6.00; tested, \$1.00 each. Ready April 1st. Send for circular.

W. S. McKnight, Newton, Ala.

3-11-tf

The Premo Fountain Pen



I did not expect to ever find a fountain pen superior to the Parker, but I have. It is not superior so far as writing is concerned, although it is just as good, but it is decidedly ahead so far as the filling is concerned. Inside the handle is a long, flexible rubber tube that holds the ink. On one side of the handle is an open spot. Pressure with the finger on this spot causes the rubber tube to collapse—to become compressed and empty. Release the pressure and the tube at once springs back into shape, and, if the pen is at the same time buried in ink, the rubber tube sucks itself up full of ink. The large cap is then slipped on over the opening, thus protecting it from pressure. This long cap covers the opening, no matter which end of the holder it is slipped over. This plan of filling does away with all the messiness of filling with a medicine dropper—sometimes filling the pen to overflowing upon fingers, desk, carpet or floor. When away from home, a filler is not always at hand, but ink can always be found at hotels, postoffices, etc. I have had one of the Premo pens in use for two

months, and it is entirely satisfactory. I can fill it in four seconds.

The prices of the Premo pen ranges from \$2.00 to \$13.00, all depending upon the style and finish of the handle. So far as actual working qualities are concerned the \$2.00 is the equal of any pen offered. I will send a pen for \$2.00, or I will send the Review one year and a \$2.00 pen for only \$2.50.

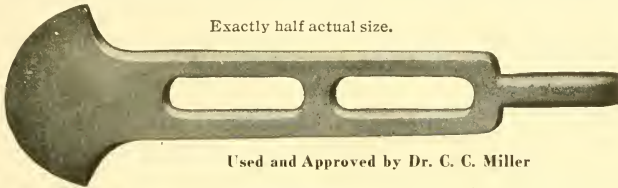
W. Z. Hutchinson, Flint, Michigan

An "Ideal Hive Tool" Free to April 1st

With the American Bee Journal one year—Both for \$1.00

Oldest Bee Paper in America, Established in 1861

Read the following particulars: No doubt there are thousands of readers of the Bee Keepers' Review who would be glad to read the old American Bee Journal regularly if they once



Exactly half actual size.

Used and Approved by Dr. C. C. Miller

get started In order to induce them to make this start we will send an "Ideal Hive Tool" with every new subscription order for one year with \$1.00 received between now and April 1, 1911, if so requested.

The American Bee Journal is \$1.00 a year—a large 32-page monthly. Every bee keeper ought to have it; and in order to induce several thousands of readers of the Bee Keepers' Review to take it for 1911, we make the above generous offer. Now is your chance to get one of these handy, valuable hive tools free. Better sit right down and send in your order with \$1.00 for the tool and the American Bee Journal for 1911. Sample copy of Bee Journal free.

George W. York & Company

117 N. Jefferson St., Chicago, Ills.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL, MICH.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER MILK BOTTLES

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POUDER, Indianapolis, Ind.

859 Massachusetts Avenue.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

PATENTS START FACTORIES



We Secure Patents. **NO FEE IF WE FAIL.**
Start right. Free book—How to obtain, finance and promote patents. Send sketch or model for free search. FARNHAM & SUES, Pat. Attys., WASHINGTON, D. C.

Camera For Sale

I wish to sell my camera, and I'll tell you why. My health, the condition of my heart, will not allow me to lug any heavy loads in the future, and an 8 x 10 view-camera, with tripod, plate holders and plates makes quite a lug. After such a camera is once on the spot, it is decidedly superior for the making of superb photos, but I must be content with something a little smaller and lighter—possibly to use films instead of glass plates. To one who is to do most of his work at or near home, or who is strong and rugged and able to carry the camera if necessary, nothing is better than a camera like mine. I have had it several years, but have always used it with care, and it would be almost impossible to distinguish it from an instrument right from the shop. It is the Empire State, made by the Rochester Optical Co., of Rochester, N. Y. It has all of the modern improvements, such as rising and falling front, horizontal and vertical swing, etc. My entire outfit, and the cost is as follows:

Camera.....	\$28.00
Rapid Rectilinear Lens.....	20.00
Folding Tripod.....	3.50
Low Shutter.....	4.50
6 Double Plate Holders at \$1.85.....	11.10
14 Inside Kits for using smaller plates at 40 cents.....	5.60
Ray Filter.....	3.00
Canvass Carrying Case, Felt Lined.....	3.50

Total..... \$79.20

I would sell the entire outfit for \$50.00, and the man who buys it would get no better if he bought direct from the manufacturer, and paid about \$25.00 more for it. Any questions cheerfully answered.

W. Z. HUTCHINSON, Flint, Mich.

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

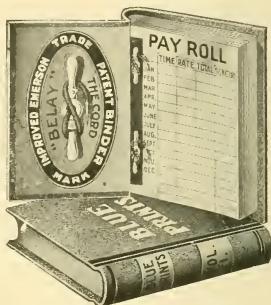
Made from Honey and Water

In any kitchen, at any hour, at a cost of 5 to 7 cents per gallon. Process by mail \$1.00

C. W. Dayton. Chatsworth, Calif.

The Emerson Binder

Much of the value of a bee journal comes from being able to find and refer to any of its issues. Reference is often made to some item or article in a previous issue, and the trouble of finding the back number is often so great that it is neglected. At the end of the year a subscriber often finds that one or two issues are missing and the publisher is not always able to supply them.



All of this trouble may be avoided by the use of a binder. The best binder on the market is an Emerson. It has stiff board covers, bound in heavy cloth, neatly embossed on the front. It is the work of only a moment to place each issue in the binder as it comes to hand, and one binder will hold two years' numbers of the Review.

The price is 75 cts. prepaid, or I will send the Review one year, and a binder for only \$1.60.

W. Z. Hutchinson, Flint, Mich.

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-1f

Electric Motor For Sale

We sold our printing office last summer to a firm already equipped with motors, hence they had no use for our motor, and it is still on hand. Here is a description: It was manufactured by The General Electric Co., it is type C. A., continuous current, of 500 volts, speed 2,000 revolutions per minute: $\frac{1}{4}$ horse power. There is also a starting box and speed controller, which allows the motor to be run at different speeds. The entire outfit cost us \$55.00, and is exactly as good today as when we bought it, yet we would be glad to sell it for \$25.00.

W. Z. Hutchinson, Flint, Mich.



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

IT PAYS TO USE

DABANT'S FOUNDATION

A. G. WOODMAN OF GRAND RAPIDS,
AGENT FOR MICHIGAN.

DABANT & SONS
HAMILTON, ILLINOIS.

COMB FOUNDATION

Bee Keepers' Supplies

The Dittmer Process Comb Foundation
Pleases.

It is made on new, improved machines
and the bees take to it more readily than
any other comb foundation on the market.

Dittmer makes a specialty of working
your wax into Comb Foundation for you.

Our Wax Circular and Bee Supply Price
List free upon application.

Write us your wants—it is no trouble to
us to answer letters.

Gus Dittmer Co.

Augusta, Wis.

BEES FOR SALE

I have 100 colonies of bees here at Flint, and there are reasons why I prefer to begin the season with a smaller number.

They are mostly in ten-frame, Langstroth hives, although a few are in eight-frame hives. The hives are all new, made of soft, white pine, and painted with two coats of white paint. Nearly all of the combs are built from wired foundation. The bees are all pure Italians, and mostly of the Superior Stock, or Moore strain. Everything is strictly first-class—could not be better.

Prices for ten-frame colonies are as follows: Less than five colonies, \$7.00 per colony; five colonies, or more, but less than ten, \$6.50 per colony; ten or more colonies, \$6.00 each.

Eight-frame colonies, less than five, \$6.00 each; five colonies or more, but less than ten, \$5.50 each; ten or more colonies \$5.00 each.

The bees will be shipped by express, in May, about fruit-blooming time, and safe arrival in perfect condition guaranteed.

W. Z. Hutchinson, Flint, Mich.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to *Gleanings in Bee Culture*—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

D. Cooley can fill your orders with the
A. I. Root Company's

STANDARD BEE SUPPLIES

On short notice. Catalog free.

D. Cooley, Kendall, Mich.

ITALIAN BEES and Queens and supplies. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-11

ITALIAN QUEENS

Bees and Nuclei

Choice, home-bred and imported stock. All queens reared in full colonies. Untested queens, 75 cents; tested, 90 cents; select tested, \$1.10; breeder, \$1.65. One-comb nucleus, no queen, 80c. Safe arrival guaranteed. For prices on larger quantities, and description of each grade of queen, send for catalog and sample of comb foundation.

J. L. STRONG, Clarinda, Iowa
200 East Logan St.

5-10-tf

New Catalog Now Ready

Of Dovetailed Hives, Marshfield Sections, Dittmer's Foundation and all kinds of bee keeper's supplies at Reduced Prices, (car loads in stock). Also all kinds of Berry Baskets, Hallock Cups, Hallock Boxes and Crates to match.

Honey and Beeswax Wanted, Wax 30c.

W. D. SOPER, Jackson, Mich.

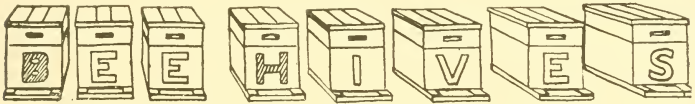
323-325 S. Park Ave.

1-11-8t

A Post-Card Projector

A year ago Santa Claus brought my eight-year grandson, Bruce Hanneman, what is called a post-card projector. By means of a powerful light, any bright picture the size of a postal may be greatly enlarged and thrown upon a screen. If you have a Youth's Companion premium list, you will find this projector illustrated and described, only the one that we have uses a 32-candle power electric light, instead of gas. This is a very interesting toy for children, but my grandson has played with his so much that he has tired of it, and he came to me and said: "Grandpa, couldn't we advertise this in the Review, and sell it, and then take the money and buy something else?" So I'm trying. It cost \$3.50 new, and is just as good now as the day it came, but we will sell it for only \$2.50. Shipping weight 4 lbs. Must go by express, and charges paid by receiver.

W. E. Hutchinson, Flint, Mich.



are our specialty. We furnish such extensive bee keepers as E. D. Townsend and others. Consider getting your bees into Protection Hives this fall. Give us list of goods wanted.

A. G. WOODMAN COMPANY

GRAND RAPIDS, MICHIGAN

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

CLUBBING LIST

Here is a list of some of the periodicals, together with prices, that I can furnish with the Review.

	Publisher's Price	With Review
18 American Agriculturist.....	\$1 00.....	\$1 90
15 American Bee Journal.....	1 00.....	1 75
15 American Boy.....	1 00.....	1 75
22 American Magazine.....	1 50.....	2 10
22 American Photography.....	1 50.....	2 10
15 Boy's Magazine.....	1 00.....	1 75
22 Breeder's Gazette.....	1 75.....	2 10
35 Buffalo Express (Weekly).....	2 00.....	2 75
15 Canadian Bee Journal.....	1 00.....	1 75
18 Camera.....	1 00.....	1 90
72 Century Magazine.....	4 00.....	4 60
14 Chicago Inter Ocean and Farmer..	1 00.....	2 10
88 Colliers' Weekly.....	5 50.....	5 40
4 Comfort.....	25.....	1 20
16 Cosmopolitan.....	1 00.....	1 80
22 Country Gentleman.....	1 50.....	2 10
62 Country Life in America.....	4 00.....	4 10
22 Everybody's Magazine.....	1 50.....	2 10
9 Farm and Fireside.....	50.....	1 45
18 Farmers' Review.....	1 00.....	1 90
5 Farm Journal (2 years).....	35.....	1 25
9 Farm Poultry.....	50.....	1 45
15 Gleanings in Bee Culture.....	1 00.....	1 75
24 Good Health.....	1 50.....	2 20
20 Good Housekeeping.....	1 25.....	2 00
9 Green's Fruit Grower.....	50.....	1 45
22 Hampton's Magazine.....	1 50.....	2 10
68 Harper's Magazine.....	4 00.....	4 40
16 Health Culture.....	1 00.....	1 80
18 Hoard's Dairyman.....	1 00.....	1 90
18 Hunter, Trader, Trapper.....	1 00.....	1 90
32 Independent.....	3 00.....	2 60
25 Ladies' Home Journal.....	1 50.....	2 25
74 Leslie's Weekly.....	5 00.....	4 70
22 McClure's Magazine.....	1 50.....	2 10
19 Metropolitan Magazine.....	1 50.....	1 95
14 Michigan Farmer.....	75.....	1 70
19 Munsey's Magazine.....	1 00.....	1 95
28 New England Magazine.....	1 50.....	2 40
13 Ohio Farmer.....	75.....	1 65
18 Orange Judd Farmer.....	1 00.....	1 90
44 Outing Magazine.....	3 00.....	3 20
57 Outlook.....	3 00.....	3 85
20 Pearson's Magazine.....	1 50.....	2 00
25 Physical Culture.....	1 50.....	2 25
58 Popular Science Monthly.....	3 00.....	3 90
40 Recreation.....	3 00.....	3 00
9 Reliable Poultry Journal.....	50.....	1 45
40 Review of Reviews.....	3 00.....	3 00
25 Saturday Evening Post.....	1 50.....	2 25
54 Scientific American.....	3 00.....	3 70
55 Scribner's Magazine.....	3 00.....	3 75
29 Sports Afield.....	1 50.....	2 45
47 Suburban Life.....	3 00.....	3 35
15 Success Magazine.....	1 00.....	1 75
18 Wallace's Farmer.....	1 00.....	1 90
13 Wisconsin Agricultural.....	75.....	1 65
34 World's Work.....	3 00.....	2 70
22 Woman's Home Companion.....	1 50.....	2 10
30 Youth's Companion (new).....	1 75.....	2 50

To find the price for more than *one* paper, and the Review, add together the numbers *preceding* the papers wanted, multiply the result by 5, add \$1.00, and the sum will be the amount to send.

I can furnish any periodical published. If you don't find what you want in the above list, write me.

At these prices there is very little direct profit to me. It simply makes it easier to renew, and helps my readers to secure their reading matter at a lower price.

W. Z. Hutchinson, Flint, Mich.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent, when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 10 to 11c; beeswax, 30c.

Feb: 16

BLAKE-LEE CO
4 Chatham Row

NEW YORK CITY—We quote white clover and basswood at from 9½ to 10c per pound; light amber, 8½ to 9c per pound; mixed and buckwheat, 6½ to 7c per pound; West Indian and Southern, average quality, 70c to 75c per gallon. Southern light color, 80c to 85c per gallon. Beeswax, quiet at from 29c to 30c per pound.

Feb. 16

HILDRETH & SEGELKEN,
82 Murray St.

CHICAGO—Extracted honey is scarce and anything of basswood or clover grades is in demand. We quote as follows: Fancy white, 17c to 18c; No. 1 white, 15c to 16c; fancy amber, 12c to 13c; No. 1 amber, 10c; fancy dark, 9c; No. 1 dark, 8c; white extracted, 9c to 10c; amber, 8c to 9c; dark, 7c; beeswax, if clean, 32c.

Feb. 15

R. A. BURNETT & CO.,
199 S Water St.

CINCINNATI—Demand for comb honey has slackened up to such an extent that those who have any on hand are sacrificing it in order to get rid of it. On the other hand, it does not seem as if the trade is craving for honey in the comb at this time of the year. Extracted honey is not moving as freely as we expected, nevertheless, for strictly fancy we are getting from 9c to 10c in 60-pound cans, two cans to the crate, according to the quality and quantity bought. Amber honey in barrels from 6½ to 8c per pound. We are paying 30c cash or 32c in trade for nice, bright yellow beeswax, free from dirt.

Feb. 6

THE FRED W. MUTH CO.

KANSAS CITY—The demand for comb and white extracted is good. The demand for amber extracted is very light. Beeswax good demand. No. 1 white, per case of 24 sections, \$3.50; No. 1, amber, \$3.25; No. 1 dark, \$2.75 to \$3.00; white extracted 8½ to 9c; amber, 7 to 7½c; beeswax, 28c to 30c.

Feb. 16

G. C. CLEMONS PRO. CO.

TOLEDO—The demand for honey is normal for this time of the year. There is a fair demand for white comb honey, and stocks seem to be large enough to supply the demand. We have some calls outside for comb honey, which would indicate a shortage in some markets. Extracted is in good demand and not much is being offered. Beeswax is firm and demand is good. Selling prices are as follows: Fancy white, 16c to 17c; No. 1 white, 15c to 16c; fancy amber, no demand; white extracted, 8½ to 10c; amber, 6½ to 7c, beeswax, 30c to 33c.

Feb. 15

S. J. GRIGGS & CO.,

ROOT'S GOODS

For Western Pennsylvania. Liberal early order discounts. Gleanings and choice queens

GIVEN AWAY

Write at once for circular. Time is limited.

GEO. H. REA, Reynoldsville, Pa.
Successor to Rea Bee and Honey Company

11-10-1f

To you who buy

QUEENS

We breed Carniolan, 3-Band Italians, Caucasians and Goldens. Ready to mail April 15. Order now to insure your queens when you need them. Address JOHN W. PHARR, Berclair, Texas.

2-11-1f

Situation Wanted By a young man who has successfully passed examination after taking course of lectures and practical work in Apiculture at the Ontario Agricultural College. Anyone desiring help of this kind for the season of 1911, kindly correspond with Morley Pettit, Provincial Apiarist, Ontario Agricultural College, Guelph, Canada.

2-11-1f

THIS BRAND MEANS BEE SUPPLIES Scientifically Made

OUT OF
GOOD MATERIAL
TAKE NO OTHER



30 DISTRIBUTING HOUSES
SEND FOR FREE ANNUAL
1911 CATALOG
GIVING NAME OF NEAREST ONE
G. B. LEWIS CO.
WATERTOWN, WIS.

Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How These Moving Pictures Were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds, so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will show a scheme for screening a honey house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M. will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet clover seed, *Melilotus Indica*, postpaid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires.**

To encourage old subscribers to secure new ones we will send a one pound package post paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

Yellow Sweet Clover (*Melilotus Indica*). What is it?

This we believe is a very remarkable honey plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and **we now have on hand something like a carload.** The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the other variety of yellow sweet clover, *Melilotus officinalis* and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

Do Not Delay Ordering

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio

APRIL, 1911



Flint, Michigan, \$1.00 a Year

Bee Keepers Review

PUBLISHED MONTHLY

W. Z. HUTCHINSON, Editor and Publisher

Entered as second-class matter at the Flint Postoffice Feb. 2, 1888. Serial number 258.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the the time paid for, will please say so when subscribing, and the request will be complied with.

Flint, Michigan, Apr. 1st, 1911

Advertising Rates

All advertisements will be inserted at a rate of 15 cents per line, Nonopareil space, each insertion; 12 lines Nonpareil space make 1 inch. Discounts will be given as follows:

On 10 lines and upwards, 3 times, 5 per cent; 6 times, 15 per cent; 9 times, 25 per cent; 12 times, 35 per cent.

On 20 lines and upwards, 3 times, 10 per cent; times, 20 per cent; 9 times, 30 per cent; 15 times, 40 per cent.

On 30 lines and upwards, 3 times, 20 per cent; 6 times, 30 per cent; 15 times 40 per cent; 12 times 50 per cent.

Clubbing List

I will send the REVIEW with—

Gleanings, (new).....	(\$1.00).....	\$1 75
American Bee Journal, (new)....	(1 00).....	1.75
Canadian Bee Journal.....	(1 00).....	1.75
Ohio Farmer.....	(1 00).....	1.75
Farm Journal (Phila).....	(.50).....	1.20
Rural New Yorker.....	(1 00).....	1.85
The Century.....	(4 00).....	4.50
Michigan Farmer.....	(1 00).....	1.65
Prairie Farmer.....	(1 00).....	1.75
American Agriculturist.....	(1 00).....	1.75
Cosmopolitan.....	(2 50).....	3.45
Harper's Magazine.....	(4 00).....	4.10
Harper's Weekly.....	(4 00).....	4.20
Youths' Companion.....(new)....	(1 75).....	2.35
Cosmopolitan.....	(1 00).....	1.90
Success.....	(1 00).....	1.75

—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

4, A No. 1 B. land, ask, box 44, Arapahoe, Wyo.

National Bee Keepers Association

Objects of the Association.

- To promote and protect the interests of members.
- To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

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Vice-President.

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R. A. MORGAN, Vermillion, So. Dak.

J. E. CRANE, Middlebury, Vt.

E. F. ATWATER, Meridian, Idaho

Annual Membership \$1.00.

Send dues to Treasurer.

Names of Bee-Keepers

TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand and arranged alphabetically (in the largest States, and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky..... 182	N. C..... 60
Ark..... 82	Kans.... 350	New Mex. 54
Ala..... 80	La..... 38	Oregon.. 106
Calif.... 378	Mo..... 500	Ohio.... 1300
Colo.... 228	Minn.... 334	Penn.... 916
Canada 1200	Mich.... 1770	R. I..... 48
Conn... 162	Mass... 275	S. C..... 40
Dak.... 25	Md..... 94	Tenn.... 172
Del.... 18	Maine 270	Vt..... 270
Fla.... 100	Miss... 70	Utah.... 68
Ga.... 90	N. Y.... 1700	Vt..... 205
Ind.... 744	Neb.... 345	Va..... 182
Ills.... 1375	N. J.... 130	W. Va.... 178
Iowa... 800	N. H.... 158	Wash.... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich

Now for 1911 Bee Supplies

We have already received several carloads of that "finest of all Beeware"—Falconer make, anticipating the heavy rush of orders sure to come this Spring. Prepare yourself NOW. Brother, for we are going to have a heavy honey yield this season, and those who order early are the ones who will profit most. Send for our catalog today and see our "MUTH SPECIAL" Dovetailed Hive and also our "IDEAL METAL" Cover—both dandies. We sell you cheaper than the rest; we have the best. Let us figure on your wants—we will surprise you.

The Fred W. Muth Co.

51 Walnut St.

"The Busy Bee Men"

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

SAWS

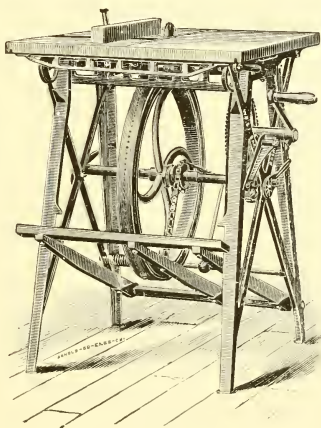
in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

351 Ruby Street
Rockford, - Illinois

4-09-16t



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.
Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

Let us hear from you, if
you want anything in the

BEE SUPPLY OR POULTRY SUPPLY LINE

Write for our

FREE CATALOGS

G. H. W. WEBER & CO.

2146 Central Ave.,
CINCINNATI, OHIO

1911 Catalog of

“falcon”

**Hives, Sections, Foundation
and Complete Line Ready**

Write for your copy

FALCONER, N. Y., just south of Buffalo, directly opposite Detroit is the location of our factory. Quick time and low freight to bee keepers in the Detroit district.

CHICAGO, ILL., 117 Jefferson St., branch with complete fresh stock, makes rush shipments to Central, Western and Northern Michigan bee keepers.

W. T. Falconer Mfg. Co.

Factory, Falconer, N. Y.
117 N. Jefferson St., Chicago, Ill.

Why Not Rear Your Own Queens

Doolittle's "Scientific Queen-Rearing" and the American Bee Journal for 1911--Both for only **\$1.00**

Every Bee Keeper Should Have Both Book and Bee Paper



DOOOLITTLE'S "Scientific Queen-Rearing" book contains 126 pages and is bound in leatherette with round corners. It tells in the the clearest way possible just how the famous queen breeder, Mr. G. M. Doolittle, rears the best of queen bees in perfect accord with Nature's way. It is for both amateur and veteran in bee keeping. As all know, Mr. Doolittle has spent some 40 years in rearing queens and producing honey. He has no superior as a queen breeder. You can learn to rear fine queens by following his directions. Read up now before the bee season is here.

You will not regret having this book, which also gives his management of the bees for the production of honey.

The book and the American Bee Journal for 1911, for only \$1.00 is certainly a big bargain for you. Send the \$1.00 now, and we will begin your subscription with January 1, 1911, and mail you the book. Sample copy of the Bee Journal free. Address

George W. York & Co., - 117 No. Jefferson St., Chicago, Ill.

Superior, Golden Italian

QUEENS

We have moved, and are now located only one-half mile from freight, express and post office. We have four mail trains daily which will enable us to fill orders for queens by return mail. We will rear for sale Superior, Golden Italians. Send for circular and price list.

T. S. HALL, Talking Rock, Pickens Co., Ga.

Choctawhatchie Queens

We offer for 1911 Golden Queens that will please. "No cure, no pay" our motto. Let us book your order now, that you may know the queens will be ready when wanted. Untested, 75c; three for \$2.00; ten for \$6.00; tested, \$1.00 each. Ready April 1st. Send for circular.

W. S. McKnight, Newton, Ala.

3-11-tf



A Double Bee Brush and Comb Box

The Cyrenius double brush will save one-half your time in brushing bees from the combs. Just pass the comb frame through it and back, if necessary, and you have a clean job.

Price, with spur to stick in the ground, \$3.00; or to nail on old hive-body without spur, \$2.60. If not satisfactory, return to Oswego and get your money back.

F. H. Cyrenius, Oswego, N. Y.

4-11-1t

Letter Copying Press for Sale

Keeping a copy of every letter sent out is a necessity with any extensive business—it saves endless disputes and many dollars. The most common method is that of using a copying book, dampening the leaves, laying in the letters to be copied, and applying pressure with a screw-press.

In a trade recently made, I have come into possession of a letter copying press, size 9 x 11 inches. As I already had such a press I don't need this one. I inquired at our stationer's, and find that the price of such a press is \$8.40. This press of mine is exactly as good as new, but I would be glad to sell it for \$5.00.

W. Z. HUTCHINSON, Flint, Mich.

S. J. Griggs & Company

Formerly with Griggs Bros. Co. carry a full and complete line of

Root's Bee Supplies

Send for catalog. Beeswax wanted.

S. J. GRIGGS & CO., Toledo, Ohio

26 N. Erie St.

2-11-5t

Bee Supplies

You will find it to your advantage to send for our 1911 catalog. We promise Good Goods, Prompt Shipment and Fair Treatment. Give us a trial order and you will not regret it. Try our Splendid Telescope Hives. They give satisfaction wherever used. Made from the celebrated red wood of the Pacific coast.

E. T. FLANAGAN & SONS, Belleville, Ills.

FOR SALE 100 hives bees in two story standard hives. \$5.00 per hive f. o. b. station. Box 545, San Antonio, Texas.



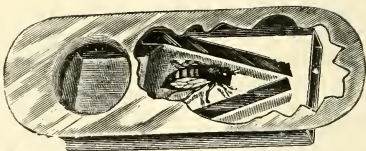
Salzer's French Bean Coffee

(SOJA HISPIDA)

A wholesome drink! The healthiest ever: you can grow it in your own garden on a small patch 10 feet by 10, producing 50 lbs. or more. Ripens in Wisconsin in 50 days. Used in great quantities in France, Germany and all over Europe.

Send 15 cents in stamps and we will mail you a package giving full culture directions, as also our Mammoth seed catalog free; or send \$1 cents and get, in addition to above, 10,000 kernels unsurpassable vegetable and flower seeds—enough for bushels of luscious different vegetables and brilliant flowers.

JOHN A. SALZER SEED COMPANY
213 South 8th St. La Crosse Wis.



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment: the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, MFERS.

SEND ORDERS TO YOUR DEALER.

ITALIAN QUEENS

any month in the year, from my Jamaica, B. W. I. yard—from Yonkers, N. Y., after May 1st I can also furnish Cyprian, Caucasian, Banat and Carniolans. Italians, untested, 75 cts., tested, \$1.50; breeders, \$3.00—other races 25 cts. extra.

Two, 5-gallon cans, 59 cts. One gallon cans, \$8.25 per 100. One pound jars and No. 25 bottles \$3.75 per gross. Root's supplies. Send for list. Gleanings, Am. Bee Journal, A B C and X Y Z of Bee Keeping, and Langstroth on the Honey Bee for only \$3.50—by mail 50 cts. extra. The Swarm by Materlink, 75 cts.—regular price \$1.30.

W. C. MORRIS,

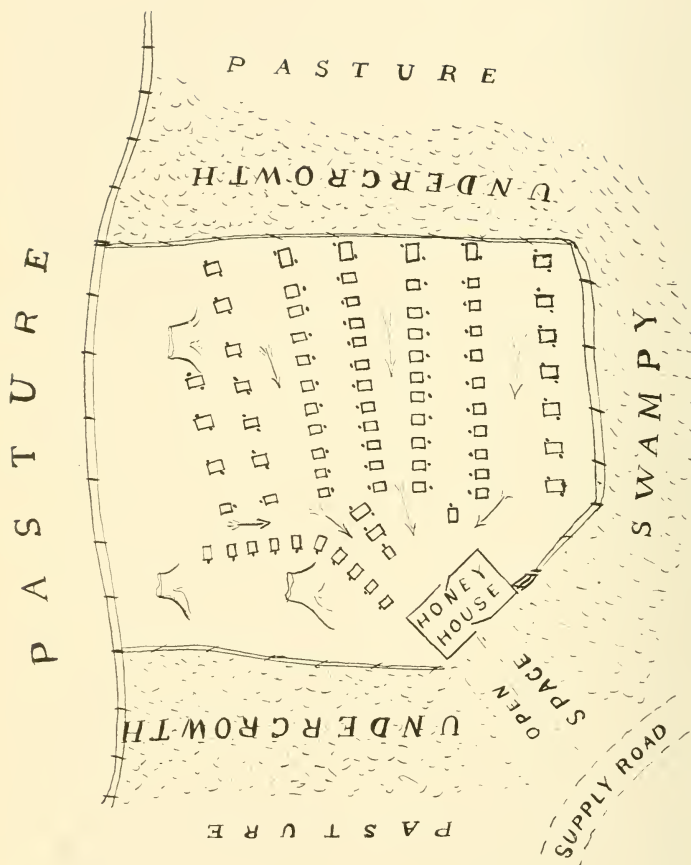
Nepperhan Heights, Yonkers, N. Y.

4-11-12t

Alexander Feeders For Sale

About three years ago we made several hundred Alexander feeders. The ordinary Alexander feeder is only four inches wide (made from 2 x 4 scantling) but we made ours six inches wide, thus adding greatly to their capacity. Before being put to use they were boiled in linseed oil, thus making them impervious to moisture. We expect to sell some bees this spring, and discontinue one apiary in Northern Michigan, hence could spare about 100 of these feeders. The ordinary Alexander feeder sells at 25 cts., and, as explained, ours are of greater capacity, and although they have been used, they are exactly as good as when new, but we would sell 100, or less, at 15 cts. apiece.

W. Z. Hutchinson, Flint, Mich.



An Apiary With Ideal Surroundings.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER.

VOL. XXIV.

FLINT, MICHIGAN, APRIL 1, 1911.

NO. 4

Important Factors to be Considered in Locating an Apiary.

LEON C. WHEELER.



I AM a great lover of a sheltered location for an apiary, and, after choosing the locality where I think the bees may secure good pasture, the next thing I

look after is a sheltered position in which to locate my apiary. There are also several other things to be considered, for instance, nearby water, with high, dry ground for the hives to set on, a place allowing of handy hive arrangement, accessibility for teams, safety from fire, remoteness from fields which have to be worked, etc.

Being obliged to move one of my apiaries this spring, I moved it fourteen miles nearer home; or to a distance of seven and a half miles from home, into a locality I had been looking at for some time. This location is in the heart of a

large alsike region. The woods nearby have a fair amount of basswood and raspberries, and there is a good supply of milkweed to fill in between the clover and the basswood flows. There are also no less than five good sized orchards in a radius of a half mile from the apiary. Dandelions grow in profusion, and some buckwheat is sown, thus furnishing an early fall flow, with goldenrod and asters for a late fall flow. What more can one ask?

The place I chose for the apiary was in the midst of a patch of undergrowth, as shown in the accompanying chart. The undergrowth stands in a pasture field fifteen rods from the nearest field in crop, and forty rods from the road. That disposes of one item, viz., that of having the bees where they will not trouble anyone.

Swampy land which comes up to the very limits of the yard furnishes water until late in the season, when the bees will be obliged to go to a creek 50 rods distant, for the balance of the season.

Undergrowth on three sides, and a hill on the fourth, furnish a windbreak and a

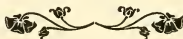
good road through the fields runs directly into the yard; or, when bees are about, one can turn off about two rods from the honey house, which, together with the undergrowth, forms a wall to throw the bees entirely out of the way. Open fields on all sides, well pastured, with only the green undergrowth close by the bees, insures protection from fires, and a very slight slope from all directions towards the honey house makes easy handling of bees and honey.

In the chart, working alleys are designated by arrows, and entrance to hives by dots. As will be noticed, some of the hives are built with two entrances and contain two colonies. They are all chaff hives, and these are placed so neither entrance faces directly into the working alley, except where they are the last hives in the row, where there will be very little passing in front of them.

Foundations were all made by driving cedar stakes, four for each hive. This is the easiest way I have ever found for making a level foundation. I made all the stakes in one half day for 65 colonies, and drove and leveled them in less than another half day; laying out the ground and leveling the alleys as I went.

This honey house will be built in sections, and bolted or hooked together. Floor, ceiling, and roofing will all be built of matched lumber, and the roof covered with tar-paper or roofing. It will have two doors; one opening into the yard and one out. The fences are built of four strands of barbed wire to keep out cattle and horses and high enough from the ground to allow the sheep to pasture the yard, which will keep down the grass and weeds.

BARRYTON, Mich., Mar. 1, 1911.



Some Reasons Why Fall Feeding Cannot Take the place of Spring Feeding.

LEO E. GATELEY.

THE position assumed by many leading apiarists upon the question of feeding, appears to be entirely in favor of providing all colonies previous to winter with sufficient stores, that none will require such attention at the opening of spring.

Undoubtedly, the situation of colonies during early spring is somewhat modified by the condition in which they went into winter quarters; yet, it would be illogical to depend implicitly upon autumn feeding. In theory, fall feeding may appear of immense value, but in actual practice it will be quickly demonstrated that bees cannot be led into rapid breeding through the instrumentality of abundant stores. Not until new honey, or an equivalent substitute, begins coming in regularly and plen-

tifully, will colonies start breeding in dead earnest.

For considerable time after the close of winter, many colonies fail to gain appreciably in strength, though rearing brood constantly. This difficulty arises from the fact that brood-rearing activities are at all times limited to colony conditions, and, in amount, is but slightly beyond the high death-rate of the aged workers. When unmolested, average colonies may gradually gain in strength and, after a time, suddenly take a new lease on life, quickly surmount the critical stage and become populous. But for an early honey flow, this desirable breeding stage is seldom reached in time sufficient to populate the hives to their full capacity by harvest.

With a view to enlarging the brood-

areas of colonies during early spring, the first steps of importance is the bringing forward of highly favored conditions under which, naturally, bees are inclined to produce the most brood.

All strains of bees, blacks and Italians in particular, are governed mainly in their production of brood by the presence, or absence, of a nectar-supply. In the absence of such, the principle requisite to promoting brood production, is the provision of a regular source of artificial food supply. This, then, is the principle upon which hangs the practice of feeding sugar syrup for stimulation. While it involves some degree of energy and expense, it is one that pays financially, even should colonies have an abundance of sealed stores. Certainly it is the only means whereby weak colonies can, without opening hives or manipulating combs, be brought to equal the strongest which have been left to their own devices.

In localities having no early flow, colonies that may have come through winter in ideal condition, can as profitably be left to their own care. We can, however, scarcely dispense with spring feeding on account of the weaklings, of which there are generally from 15 to 20 per cent.

The amount of syrup a colony will require daily must depend to no small extent upon circumstances. Those strong numerically and headed by prolific moth-

ers capable of supplying an unlimited number of eggs, may consume from half to one pint. Others, owing to a scarcity of numbers, or having queens inadequately prolific, will require a less amount.

As at no other time, spring feeding must be conducted in such a way that no bees will be accidentally drowned in the proceedings. Should that occur, their force will fast diminish by the very thing, which is intended to populate the hive. In years when at the end of winter colonies are in excellent condition, stimulation is rarely necessary or advisable. Therefore, when it becomes necessary, conditions of warmth and economy of bee life are absolutely indispensable to success.

Without question, judicious and intelligent feeding for the purpose of assisting invalid colonies, is advantageous, especially at a time when bees have access only to old, thick honey. To dilute such honey for the preparation of larval food, they will otherwise be forced to venture out in precarious and ruinous weather in search of a watering place. But whether we wish to feed for stimulation or merely to prevent some of the colonies starving, the fact remains that spring feeding is often unavoidable with all systems and in the best managed apiaries.

FT. SMITH, Ark., Dec. 17, 1909.



A Machine for Imbedding Splints in Foundation to Prevent it from Sagging.

A. T. ATWATER.

IN many apiaries, an examination of the combs reveals at once one cause which must inevitably prevent the development of the greatest strength per colony, and so reduces materially the average yield.

I refer to the sagged combs, and the

consequent neglect to fill the imperfect cells with brood.

As wiring alone is usually insufficient and unsatisfactory in producing perfect combs, some resort to the use of splints.

After extensive tests, on hundreds, and even thousands, of frames of foundation,

stayed by various methods, we prefer a combination of splints and horizontal wires. When splints alone are used, not only are the lower ends of the splints too often gnawed away, but the result is very likely to be as shown in the cut—sag not entirely prevented, and vertical waves produced between the splints.

As no convenient or expeditious method of splinting foundation has ever before been described, I will describe the plan and the machine that we use.

A board $8 \times 16\frac{3}{4} \times \frac{7}{8}$ is nailed to a bench, a lever $\frac{5}{8} \times 2 \times 18$ (on the lower side of which is screwed a block $\frac{3}{4} \times 3 \times 8$) is hinged as shown, and to the upper side

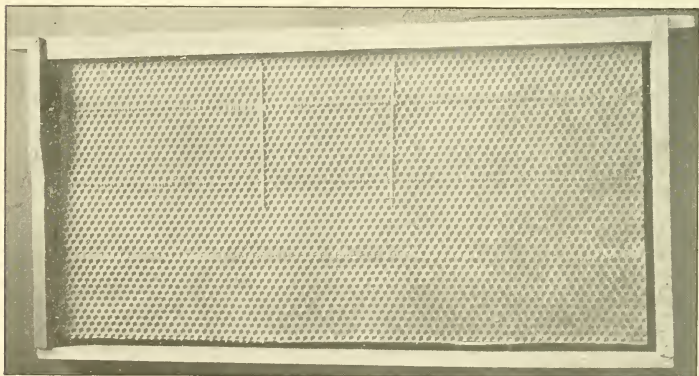


Wavy Combs When Only Splints are Used.

So we prefer to wire the frames with three horizontal wires; and reinforce the part where most of the sag occurs, with two short splints, four or five inches long (tooth-picks will do in an emergency) or

a small spiral spring is attached by one end, and engaging a screw-eye, while the upper end is fastened to a cord, which hooks over a screw-hook in the ceiling.

The foundation, after having the paper



Splints and Wires Hold the Foundation Perfectly in Place.

for light brood foundation, four splints five inches long.

This not only prevents sag, but is a very valuable reinforcement in extracting.

We have many thousands of frames of comb so prepared, and, while not all perfect, the average is better than before.

removed, is placed in a pile at one hand, a sheet is taken and placed on the board as shown, and a sponge wets the block on lever. Two splints are lifted from the hot wax, and "snapped" into place, over two lead-pencil marks on the board (which show through the foundation) the

hand grasps the lever as shown, brings it down with a firm quick stroke, and forces both splints into the foundation. The handle is released, and the spring instantly lifts the lever out of the way.

When light brood foundation is used, the board which supports the foundation slides along a guide strip, so as to allow

two splints to be imbedded, when the brood and foundation is slid along to a stop, and the other two splits placed and imbedded.

In a short time, an entire box of foundation is splinted and ready for the frames.

MERIDIAN, Idaho, October 30, 1910.



Making Over \$4,000 from a Single Apiary by Being "Johnnie on the Spot."

R. D. BRADSHAW.

THE year 1905 found me running three apiaries in Payette Valley. Foul brood was prevalent. In fact, there were heavy losses on every hand. It was the fear of this disease, coupled with the desire to keep my bees as clean of the same as possible, that drove me to bring in my out yards, and run all together, a total of 500 colonies. SUCCESS CAME FROM MASSING THE BEES IN ONE YARD.

Now, let me say, right here, that this was the turning point in my success with bees. From that season on, my yields, per colony, steadily increased. The reason, I believe, was simply because I was on the spot, and could give them the prompt and needed attention, which is so necessary for success; instead of keeping the road hot between yards.

In the year 1908 this yard produced 1,800 cases of 24 sections to the case, of comb honey, which sold for \$4.679, F. O. B., Payette. It was sold to Page & Son, of Portland, Maine, on Sept. 1st.

My expenses were light, as I did nearly all of the yard work myself. Cleaning and casing the crop was the greatest item.

My system was the "Old Time Swarm-ing Plan," but extra manipulations were cut down to a minimum. Stimulating feeding was practiced some three weeks

during the usual dearth preceding the flow. It pays big to keep the bees booming at that time. Very thin syrup was fed in the open, in tubs, with straw as a float.

GETTING BEES STARTED IN THE SUPERS WITHOUT "BAIT" SECTIONS.

I don't like bait sections. Honey produced in them is usually inferior. On the opening of the flow, 20 colonies were shaken upon five frames with starters, and given sections. As fast as drawn out, these sections, bees and all, were distributed over the yard, giving backward colonies the needed incentive to the start-ing of work in the supers.

At this time, hives were raised one inch, or more, from the bottom board, front and sides. This, with plenty of super room and shade boards kept down swarming to ten per cent. Swarms were hived on starters, and the sections given from the parent stock, which was moved back, and the swarm put in its place, both being united again for the second crop, three to four weeks later. Honey was taken off fast as completed, cleaned and cased. When the last was off, the car was ready to load.

THIN TOP BARS AND BURR COMBS ADVANTAGEOUS.

Give me thin top bars in brood frames. I would much rather have a few burr

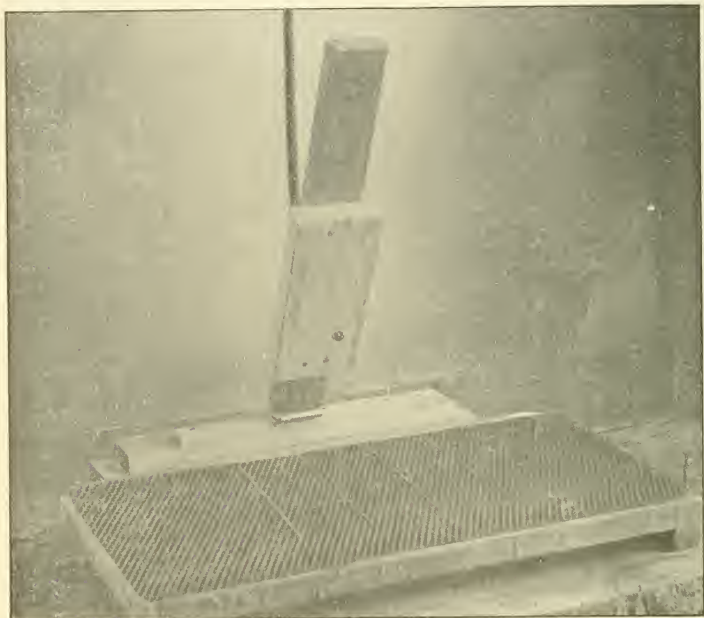
combs than not to have the bees readily enter the supers. We must have our sections as close to the brood as possible.

Conditions here are identical with most Alfalfa districts; first crop blooming June 10th to 30th; second crop, Aug. 1st to 30th, according to season. Sweet clover furnishes more or less honey throughout the summer, but rarely yielding much

now owned by Mr. Henry Widner, who is running 600 colonies, and has produced a car load of comb honey each season, with the same system.

BEEES MORE PROFITABLE THAN SHEEP.

Not being able to obtain sufficient range for my sheep on the Forest Reserve, it necessitated the disposal of them; and



Machine for Putting Splints into Foundation.

surplus. My plan was to get all the sections possible drawn out during the first flow.

During the year of 1906 this yard produced 34,000 pounds; and, again, in 1907 the crop was 32,000 pounds.

I sold out in the fall of 1908 and entered the sheep business; buying 4,400 sheep on the range. Although away a great deal during the last two years, I have kept posted on this yard, which is

once more embarking in the bee business, by my purchasing the outfit of Mr. Otto Geise, of Nodus, Idaho, at which place I will own 700 colonies in one yard. Considering the capital invested, and the operating expenses, there is more money in the bees, by far, than in sheep.

Don't let me influence anyone in not establishing out yards. Do so by all means if you want to branch out, but my idea is to be sure and make them big

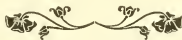
enough so you can employ a competent man to be on the spot.

ADVANTAGES OF UNOBSTRUCTED FLIGHT
NEAR THE APIARY.

In locating a large yard be sure and place your bees so that they can have an unobstructed flight and vision in all directions. Few apiarists know how a dense clump of timber close up to the bees cuts down their range. Nine out of

ten bees will work the other way instead of going over or through the trees. Better, by far, have them in the timber, for then they would fly up and work in all directions. Of course, if the only nectar to be had is in one direction, they would fly that way, but, all things being equal, they will take the easiest route and the one they can see.

PAYETTE, Idaho, Feb. 7, 1911.



Transferring, Italianizing, Making Increase and Getting Surplus.

ALBERT SWANSON.

FRIEND Hutchinson:—Would you please answer the following questions for me?

1. Which grade of foundation is most economical and best to use for brood frames; also for extracting frames, both being wired?

2. I bought some hives of a friend. When I got them home I found them to be in homemade hives, made out of cracker boxes, etc., but with removable covers. These box hives are very large, being equal to about an eleven- or twelve-frame standard hive. I wish to transfer them into standard hives sometime this coming summer. I would also like to have a swarm from each in the early spring, one that will produce surplus honey, and still have the parent colony strong enough to produce surplus honey also. In other words, I wish to make the same increase as you mention in your "Story of the Season," and have it made at the same time of the year as you did, so as to get a crop of surplus honey. I also want to requeen all these stocks with Italian queens.

Now, just suppose the 40 colonies you had a year ago this spring had been in these hives that I mention, with common black queens in them, and you wished to Italianize and increase so as to get the

same result that you now got from the 40 colonies you had last spring. How would you proceed?

I have thought some of this plan: Feed early in the spring, and after they are quite populous, I would put on a standard brood frame body with frames of foundation in it, on top. Then keep on feeding until the queen goes up into the upper body, when I would take it off soon afterward and place it upon a new stand and requeen it. I would also requeen the old box hive (that I took the upper body from) by introducing a queen in a Miller cage. Then, after the honey season is over, I would transfer the bees from this old hive into a standard hive.

Would the above plan work satisfactorily? Or would you prefer the Heddon Short Way of Transferring as given in the A B C and X Y Z?

3. Could I rear two dozen queens early in the spring for requeening these hives as cheaply as to buy them of a breeder? I never reared any queens.

SWEA CITY, Iowa, Feb. 11, 1911.

[I would use medium brood foundation. The cost is only a trifle more than for the thinner grade, while its use (wired) does away with all trouble from stretching and breaking. There is sufficient wax in the foundation to build the combs complete.

They are built quicker, and are stronger.

You would lose money in attempting to rear queens early enough in the season to make increase as I did last spring. Better get them from the South.

I doubt if the queen would go up into an upper story furnished only with foundation. If honey is coming in, the foundation is soon drawn into combs, but queens don't like these new combs so well as they do old combs. If you had

the thousands, daily. Another thing: All the surplus better be stored on the old stand by the newly formed colony, and it must be given all the bees possible at the outset, and then nourished or strengthened, by giving bees from the old hive as they hatch and become old enough to fly.

I would introduce an Italian queen to the old colony, as suggested by Mr. Swanson, after driving out the forced



Putting Splints into Foundation.

some sets of old combs to put on as supers, the queens would soon go up and occupy them. It compelled to use foundation, I see no better way than to drive (drum) the queen and most of the bees into the upper story filled with foundation, leaving this drummed out swarm on the old stand. Don't put it on a new stand. Some of the bees would return to the old stand, and the flying bees that are out in the fields would be lost to this new swarm. Remember, this newly established colony has no brood, and will have no bees hatching for three weeks, while, in the old colony bees will be hatching by

swarm, also one to the forced swarm as soon as I could get around and find the old black queen.

After making the forced swarm, and placing it upon the old stand, I would set the old hive by the side of it, with its entrance turned away at an angle of about 80 degrees. Gradually every day or two, for a week or ten days, I would turn the old hive toward the new until the two hives stood parallel, close together, when I would pick up the old hive and set it upon the *opposite* side of the new hive, turning the entrance around at an angle of 80 degrees. This throws all of the

flying bees from the old hive into the new one. Gradually, I would again bring the old hive around by the side of the new one, and, in a week or ten days, I would move it to a new stand, and, a day or two later, transfer in the regular way, by cutting out combs of brood and fastening them into frames. I would prefer to do all this work before the close of the honey

flow. I would not like to transfer after the close of the honey flow.

Before commencing these operations the front of the old hive must, in some manner, be made the same color as that of the new hive. This can be done with paint, or pasting on paper of the right color.—EDITOR REVIEW.]



EDITORIAL

Do one thing and do it well.

The Canadian Department of Apiculture in British Columbia has gotten out an extensive, illustrated Bee Bulletin, or Guide to Bee Keeping, of 52 pages, and it is written by no less personage than our old-time friend, F. Dundas Todd, formerly editor of the Photo Beacon, but now sojourning in this far western country.

The Jones Method of preventing swarming has been tried by some three or four of my subscribers who have reported. With them it had proved successful, and they had secured good crops of honey. No failures had been reported. One man was successful by simply uncapping the drone brood. I presume such would be the case where there was sufficient drone brood. Where there were only a few cells, I should not expect the uncapping to have any effect.

A Short Course in apiculture will be given May 1-6 by the Ontario Agricultural College. It will be conducted by the Provincial apiarist, Mr. Morley Pettit, assisted by Prof. E. F. Phillips, of Washington, D. C., and S. F. Edwards, C. A. Zavitz and R. Harcourt, of the Ontario Agricultural College. Lectures, as far as possible, will be illustrated with lantern slides and the actual objects under discussion.

Initiative is often what leads a man to success. What is initiative? Well—the best definition, the most comprehensive yet graphic that I ever saw, I came across the other day in the System Magazine. It is as follows: "Initiative consists in doing on the spot, without being told, and without complaining, what the other fellow never thought of doing—and didn't do when he was told."

The Beginner needs a text book. The few questions to which he may get brief answers in the bee journals, can never take the place of a good text book. One man, in his request for a beginners' department said: "Sometimes it seems as though you fairly *hated* a beginner." Nothing could be more unjust than this accusation. The beginner occupies the warmest corner of my heart. Above all things I wish to help him and have him succeed, and for this very *reason*, if for no other, I want him to get a good text book. It's the best advice that I can give. He can't hope for success without it.

The Success Worth While.

If a recipe for true success could be put into a sentence, I believe it would run something like this: Growing a little every day, looking out upon life fearlessly and hopefully, doing with our might the common task that stands before us, trying to make ourselves good and other people happy rather than ourselves happy

and other people good, treating duty as a friend rather than a master, and work as a joy rather than a task, laughing often, worrying about nothing, and loving all men. If this does not bring success, it will bring something that is better, for it carries with it all that is best in life.—
Walter Taylor Field.

Adopting the Ten-Frame Langstroth as the Standard Hive.

The Langstroth frame has become the standard *frame*, and now an attempt is being made to standardize the ten-frame Langstroth hive. It is a worthy object and shall have my sympathy and support. Bee keepers' supplies are very high in price; unusually so—some of us think they are higher than necessary. Let that be as it may, one thing that makes the price high, is the multiplicity of styles and sizes of the various commodities. Look at the various sizes, styles and widths of sections. See the different sizes and styles of shipping cases, for even the *same size* of sections. And so on through the list. The more these things can be standardized, cut down to one kind, size and style, the more cheaply they can be furnished. If everybody would use the ten-frame Langstroth hive, it would not only lessen the cost of hives, but would also cut down all the list of furnishings that go with hives.

The Influence of Environment.

Environment has a wonderful influence upon man. Not only the people with whom we associate, and the books we read, but the house we live in, the food we eat, even the clothes we wear, have more or less of an influence upon our lives. The man who always buys cheap clothes, buys a cheap farm, team and tools, builds a cheap house and always patronizes a cheap hotel, one whose mind always surrounds itself with cheap things, those of a low grade, eventually becomes a *cheap man* himself—like his surroundings. This course is often taken from mistaken notions of economy. The

man who sits down to write an article with a stubby pencil or on scraps of waste paper, can't expect to write so good an article as though he were pushing a fine, gold fountain pen over smooth, white, nicely ruled paper. No, I don't advise, nor expect, one to be foolishly extravagant, but I would prefer to have fewer things, and let them be of first-class quality, than to surround myself with a lot of cheap trash. In the end there is more profit and comfort in articles of good quality; besides they really have a beneficial influence upon their owner.

An Above Ground Wintering Cellar Cannot be Made Satisfactory.

Mr. Geo. Wood, of Wesley, Ontario, writes me as follows:

WESLEY, Ont., Jan. 16, 1911.

Editor Review:—I am going to take advantage of "special request," page 18 of January Review.

Being in a location where a good cellar is an impossibility, and out door wintering unsafe, I wish to learn how to build an above-ground wintering house. I have had considerable experience with a sawdust packed building, but the results are too many dead bees on the floor. In the accompanying engraving the building is shown just back of the dwelling house. I would like to see this subject considered in the Review.

Geo. Wood.

I never knew a building above ground to be a success as a wintering place for bees. The whole trouble lies in the variability of the temperature. A cellar below ground is kept at an even temperature by that great reservoir of heat, Mother Earth. Walls of some non-conductor, or slow conductor, of heat do not manufacture any heat. They simply prevent any heat that may be confined inside of them to radiate away more *slowly*. Let the walls of a building be two feet thick, and filled with sawdust, if a spell of zero weather comes on, and lasts long enough, it will be only a question of time when it will be just as cold inside the building as outside. That is, providing, of course, that there is no source of heat inside. A building above ground, such as

the one shown in Mr. Wood's bee yard, derives very little heat from the earth. If there is a floor in the building, I doubt if it secures practically any heat from the earth.

Of course, quite a lot of bees, say as many as 100 colonies, will generate quite a lot of heat; and, if the walls are thick and filled with sawdust, the temperature in steady cold weather, not too severe, might not be far out of the way, but the greatest trouble seems to be in variable weather towards spring. I know of a bee

and tried to carry out the bees, when there was a wild rush for the open air. Many of the hives were practically deserted. Many of the bees scattered wildly out of doors and were lost. In fact, the apiary was practically ruined.

If I lived in such a region, I'll tell you what I should do: I should build a cellar on top of the ground, and then bank up around it with earth, thus making it practically a cellar under ground. I should make it as *large* as possible, so as to cover as much earth possible, thus in-



Courtesy Canadian Bee Journal.

Apiary, Home and Wintering House of Geo. Wood, Wesley, Ontario. !

keeper living on land that was once an immense swamp. It has been drained, but not deeply enough to allow of the building of cellars. He built a brick house above ground and attempted to use it for wintering his bees. They passed the winter fairly well, but, with the first warm days became very uneasy, leaving the hives, flying about the room, and collecting here and there in great clusters. In desperation, my friend opened the door

creasing the supply of heat from the earth, and I would make it as low as I could and allow one to stand erect, as this would lessen the labor of banking. By banking clear up to the eaves, and sloping the earth back very gradually, we have a sort of miniature hill, with a cellar in its center. I see no reason why such a cellar need not meet every requirement. If any reader sees a flaw, will he please point it out?

Expert Advice.

I doubt if it is generally known that there are men who go about the country giving expert advice to business men, merchants, manufacturers, and the like. Perhaps these men might be called "systematizers." A manufacturer, for instance, finds that his business is not paying him, or not proving as profitable as it ought. He has a good plant, is doing a good volume of business. yet there is a "screw loose" somewhere, and he is unable to find it. He finally sends for an expert. When he comes, everything is thrown open to him. Nothing is kept back. To conceal anything would be like deceiving your physician. He spends several days examining the business in all of its details. He learns how, and where, and for how much, and in what quantities, the raw materials are purchased. Then the process of manufacture is followed carefully through all the details. Particular attention is paid to the system employed, or the lack of system, to the book keeping, etc. Then comes the selling, the methods employed, the advertising, etc. The employees may not know that there is an expert among them. He may work as an apprentice in the different departments, and thus get a true view of things, and not as they would be performed if it were known that some one was watching. The leak is often found where least suspected—sometimes there are several leaks. It is well-nigh impossible to see ourselves, or our business, as seen by others. How many times have I seen some man making a mistake in business. I knew it was a mistake, just as well as I could know anything of which I could not be absolutely certain, but it was none of my business to tell him so, and he would have been offended had I done so. On the other hand, I have often wished that an expert in my line of business could come in and "look me over," and tell me where I was making mistakes.

These experts, working continually in this line of work, become really and truly experts in detecting the weak spots in a

business. The wages that they command are something fabulous, but many a man who has employed an expert "systematizer," has found it money well-spent. Sometimes it is necessary to wholly reorganize the business, so to speak, to introduce a different system, or to make radical changes, and, again, the trouble may arise from some simple matter easily remedied, but not suspected.

In my travels about the country I often come across apiaries that are in need of expert advice, of a "systematizer." In some instances, I could very easily and quickly tell the owner where he was making a mistake; in others it might require much examination and study to locate the trouble; and it is quite likely there will be cases beyond my ken. There are hundreds of bee keepers all over this country who are not successful in the highest and truest sense. Their lack of success comes from poor management. I don't mean deficient or improper manipulation, as most bee keepers understand that part of their business better than anything else, but in not taking the proper advantage of their advantages. What is needed is some radical change. It may be one of many things. I have seen some instances in which the best possible thing a man could do would be to drop bee keeping. He was not adapted to it, and it seriously interfered with some other business to which he was adapted. There are localities in which successful financial bee keeping is practically impossible, and it is a waste of time to attempt it. Many might make a success of bee keeping if they would keep enough bees. This is a point that I have urged so persistently that I fear some have tired of hearing it, but it is a vital point most sadly neglected. In order to keep more bees, it may be necessary to adopt different methods requiring less labor or "fussing." A man may be trying to do all of the work himself in the busy season when he needs help—when he should be doing the overseeing, and others the work. If a man loses his bees winters he can never

hope for any great success, and a radical change may be needed in his plan of wintering. A man may be a good bee keeper, yet his method of disposing of his crop be such that no manufacturing plant could ever survive if it followed such slipshod, unbusiness-like methods in disposing of its output. It is impossible to point out the numerous ways in which a man may fail in reaching the highest success as a bee keeper; and the unfortunate part is that he does not realize, himself, the cause of his failure. I have often thought that it might sometimes be possible for me to help my readers in thus pointing out the needed changes for turning failure, or indifferent success, into abundant success. In doing this I should make no claim as to superior natural abilities, or "smartness," simply that my past life has fitted me in that direction. My whole life has been devoted to bee keeping. I began its study while yet in my teens. For years I made my living from the apiary; I have produced both comb and extracted honey; reared and sold thousands of queens; attended and made exhibitions at fairs, year after year; attended numerous conventions where I have met the most successful bee keepers of the country; and, above all, I have visited hundreds of bee keepers, in their homes, from Vermont to California, carefully studying *why* they have succeeded and *why* they have *failed*. During all of these years I have carefully read nearly everything that has been published in this country on the subject of bee keeping; and, for 24 years, as editor of the Review, I have enjoyed the confidence of thousands of bee keepers who have favored me with reports and descriptions of their failures and successes. Successful bee keeping is about half bees, and the other half business, and the latter half has been almost entirely neglected. For this reason I have been giving much attention of late to the business features of bee keeping. For these reasons I might be able to visit a bee keeper, the same as

an expert visits a merchant or a manufacturer, and be able to say at the end of my visit, "Mr. Blank, if you would do thus and so, make such and such changes, you might make dollars where you now make dimes." I think it is possible that I might be able to thus advise a man without ever seeing him or his apiary, providing he would write me a complete and minute history of his case. If there is any reader of the Review who feels that he is not making the success of bee keeping that he might make, is having a hard time "to make both ends meet," and feels that possibly I might help him if I knew all of the circumstances, let him write me those circumstances in the fullest possible manner, and he shall have the best advice that I can possibly give him. He must, if he expects me to help him, tell me everything that can possibly have a bearing on his success, just as the manufacturer opens up his factory to the expert. Of course, everything would be held in the strictest confidence, not shown to others, or published—at least not without the full and free consent of the writer.

First, I should wish to know about the man himself; his age, disposition, education, knowledge and experience with bees, the books and papers he had read etc. Then his resources, cash, farm or home, bees or what not. Next, I should wish to know all about the location and its peculiarities, the honey flows, the number of bees kept by the writer, and others in that vicinity, the yields, the manner of wintering, and the success in that line. I would like to know the kind of bees kept, the kind of hives and implements used and the methods employed. I would like to know the kind of honey produced, how prepared for market, how marketed, and the prices secured. This is simply an outline of what I would like to know; in fact, a man could not tell me too much. Especially, would I like to have him tell me what he thinks is the greatest drawback to his success.

After I get such a letter, or history from a man, I might wish to write and ask him a lot of questions; in fact, there might several letters pass between us before I would feel justified in giving an opinion in the matter.

What will be charged for such services? There will be no charge. I expect that

the rest of my life will be devoted to helping bee keepers, and each man that I can in this manner assist to greater success, will enable me to do still better work in this line for others needing similar assistance, and, at the same time, will better fit me for my duties as editor of the Review.

Selected Articles.

AND EDITORIAL COMMENTS.

BREEDING FOR BEST BEES.

Some of the Desirable Traits, and the Steps Necessary to Secure Them.

The average bee keeper pays very little attention to the breeding of his bees. A few men have turned their attention in this direction, and are reaping rich rewards. Mr. Geo. B. Howe, of Black River, N. Y., is one of these pioneers. About a year ago he gave the readers of the Review an outline of his methods of breeding, and ever since then, there has been a steady call for "more" from his pen. At the Albany convention of the National, last fall, he read a short paper on "Selection in Breeding to Increase the Honey Crop." It is something in the same line as the article that he contributed to the Review, but sufficiently different to make it worth while to copy it. Here is what Mr. Howe said at Albany:

In trying to impart to you one of the most essential things in apiculture and yet the most neglected, for we have been told that it was impossible to improve the honey bee, I often wonder what reason anyone has for such an idea. We all know what has been said on the subject, and yet a few years in selecting and breeding not only contradicts, but proves beyond a doubt that it was all theory. Theory is all right, used as it should be, but facts are what we want. In my breeding I have been led by facts, not by

color or any other hobby. I wish that my most beautiful bees would produce for me as much honey as the other less standard stock.

The old theory is that it matters very little what drone a queen mates with, if she has a good mother. I have the proof that it does make all the difference in the world, if you wish the very best queens. Just stop and think seriously about this. Does not every breeder of animals put as much dependence on the male in breeding? You will find that he does, and more.

It is a wonder that we have as good honey-gathers as we have. And let me explain just why it is so. It is all in the law of the nature of bees, for the strongest drone is pretty sure to mate with the queen. You all know, or should know, that in years past our very best honey-getters were ruthlessly killed with sulphur fumes, because they made the most honey.

I find after years of records of the best queens that I could rear or buy, it was the colonies that were very dark, some showing only two yellow bands unless filled with honey. So I have found that colonies with bees too yellow, or too dark or black, were not the largest producers.

There is a standard in color to go by, and it never has yet failed with me. In all fancy stock there is so much to sacrifice for beauty. Now, then, it is an easy matter to select a good breeding queen. Rear a few queens from her; and if the average is high and even, she is a good breeder. Otherwise she should not be used.

LONGEVITY IN BEES.

There is one way to prove this trait in your bees, and that is in the working sea-

son. It will surprise many to know that ten days, or even five, on a bee's life means many dollars in the bee-keepers' pocket. Don't think that if your bees winter perfectly that they have this trait. Test it in the working season. It is the only sure test. Be sure that every queen-mother has this trait. Also your drone mothers.

HEREDITY.

Here hangs our success or failure in selecting a breeding queen. Never use a queen just because she is a wonderful honey-producer. Test her to know that she produces her desirable traits in her daughters. Not every queen is a breeder; very few, in fact, that are what they should be; but I find that in being led by facts, and not by any theory I am gaining in getting more good queens. I put great stress on my breeding queens, whose bees show vitality to fly in the rain and when it is cool. Also they should have long wings. Some Italian bees carry as much as a third more honey than the black bees. Bear in mind these trivial things,—as they will look to many bee-keepers,—for they are of vital importance, and should not be overlooked.

Remember, any bee will gather and store honey when there is an abundance of nectar in the flowers, but in selecting my breeders I prefer a poor season. Then we surely know that when they store a good surplus in such season she is worth the price. Any one can easily tell when bees have the most desirable traits, with a little patience. Longevity you all know. Certain colonies will have as many bees in the hives as other colonies, that have a third more brood. Furthermore, those same colonies keep their numbers steadily increasing, while the other colonies come to a standstill. If you will take a frame of brood from these best bees, and put it into a colony of black bees, keeping a careful record when the last bees hatch, and when the last bees disappear, of these bees that you are testing, you will surely know, if in the working season, that you are right.

Prolificness is all right, and all breeding queens should be prolific, but without the other traits to go with it, it counts for nothing, and I think we have been misled by some writers advocating it so strongly.

We must watch our bees to learn their range of flight. It will surprise some to know that some colonies in the same apiary fly less than half the distance that other colonies do. These are facts, and I will say that the trait of long range in our yellow bees is in this direction. I think

we, as a whole, have been led too much by color alone, losing sight of traits that great honey-producers must have. I find that my best colonies winter perfectly, and unless they do, we should not use them as breeders in this northern country, at least.

This trait of longevity is separate from hardiness, and should not be confounded with it. And if bees do not show length of life in the working seasons over other colonies, we will not know they possess this most valuable trait. I bring this up to be sure that you understand it. No race of bees shows the trait or characteristic of hardiness like the black or German bee, to my knowledge. But there are too many poor colonies of this race. So stick to the dark Italians, every time, if your bread and butter depends upon honey as a business.

The drone has been sadly neglected and unless we select our drone-mothers as persistently, and know that they possess all the desirable traits of our queen-mothers, we will never succeed in producing the very best honey-gatherers.

HONEY BOARDS AND BURR COMBS.

If the Former are Used, the Latter Need
Never be Cleaned Off.

Every little while some bee keeper tells about scraping burr combs off the top bars, and, a while ago, I said I had never done this, and saw no necessity for so doing. Dr. Miller flew to the rescue, and said that unless these burr combs were cleaned off, they would be extended and attached to the sections. I replied that I had no such troubles, as I always used honey boards, and would not think of producing comb honey without their use. In reply to this the Doctor has the following in Gleanings:

Editor Hutchinson says, Review, p. 25, that he would never think of producing comb honey without honey-boards. I used them for years; and for years, with thick top-bars, I have done without them, and I wouldn't think of going back to them. It is true that some comb will be built between top-bars and sections; and it is true, as he says, that "cleaning off the burr combs in the spring does not prevent the bees from building another set." But if cleaned off every year, or even

once in three years, they will never be very bad, whereas if never cleaned off they will become worse every year. Between top-bars and honey-board they became so bad I had to clean them off; and if never cleaned off I *think* they would become so bad that in time the bees would build between the honey-board and sections.

My assistant says: "Does Mr. Hutchinson know what he is talking about? Why, I wouldn't go back to honey-boards with the killing of bees, the solid mass of honey, and the dripping, nasty, sticky, mussy mess—oh!" But I can't give the disgusted expression on her face.

"Does Mr. Hutchinson know what he is talking about?" Well, I will explain how I use the honey boards, and then let Miss Wilson judge for herself.

No one knows better than I know, that the bees will build a perfect network of burr combs between the top bars and the honey board, but in all of my experience, I never knew them to build a brace comb above a honey board—the supers can be removed and shifted about with never a daub nor a drip. If this honey board had to be removed once a week, or as often as supers are usually changed about on hives, then this breaking of the burr combs, with the attendant daub and drip, would become almost intolerable; but this honey board is put on only *once*, early in the season, when there is no breaking of combs of honey, and it *stays there all summer*, unless something befalls the colony making an examination necessary. I say the honey boards stay on *all summer*, I often left mine on the year round. I think many of them remained in place as long as three years. When putting on the honey board at the opening of the season, it is an easy matter to smoke the bees down so that none are crushed, and after it is once in place I see no reason for pulling it off again until the season is over, unless something unusual happens to the colony.

As Dr. Miller admits, when no honey board is used, some burr combs will be built, even between thick top bars and the sections, and this is a nuisance to which I would never submit when it can be

remedied so easily as by the use of honey boards.

SECOND HAND CANS.

As a Rule their use is Decidedly
Unsatisfactory.

It would seem as though a tin can that has once been used to ship honey might be used again to advantage, and so it might if certain conditions were observed, but, as a rule, they are not; hence the dissatisfaction. Nearly every producer of extracted honey has to give them a trial before he is satisfied; sometimes there are several trials, but, sooner or later, the experience turns out just as so graphically described by F. B. Cavanagh in a late issue of *Gleanings*. Mr. Cavanagh says:

The only possible object in using second hand cans is the saving in cost over new ones; therefore if second-hand cans cost us 30 cts. less per case we can obviously sell our honey at $\frac{1}{4}$ ct. per lb. less when we market. Furthermore, if the cans contained nice, light honey, and have been carelessly drained, there will be close to a pound of honey in each can, which, included in the selling weights, may net us 10 to 15 cts. more per case. All very well so far, and a good-appearing proposition; but now for the facts and figures governing both sides of the case.

In the first place, it is exceedingly hard to get cans which are good enough. The dealer empties his once-used cans after melting the contents by placing the can in hot water. The can looks very good, but in reality it is injured at the time of emptying when he shoves it back into the box to await an order from some bee keeper. Mr. Beekeeper writes a letter something like this:

HONEY BEND, May 22, 1910.
Honey Bottler Co., Big City., U. S. A.

Gentlemen:

Have you any good second-hand cans, conforming strictly to the following specifications? New cans used but once for white clover, alfalfa, or sage honey; bright and free from rust both inside and out; free from leaks; not battered, and with caps which fit; cases to be in good condition for shipping. You might also quote me on the same cans shipped without cases.

I had decided never to use second-hand cans again, as I had to throw out fully one-fifth of those purchased from a firm last year. However, the 100 cans you sent me loose last fall were so good (with the exception of the ones the trainmen used in playing football) also, that your firm is highly recommended to us; hence we contemplate trying once more, if prices are right. Yours very truly,

E. Z. BEEMAN.

In due time a cheerful reply comes back:

BIG CITY, U. S. A., May 27, 1910.

Mr. E. Z. Beeman:—Replying to your favor of the 22d, we have for immediate shipment 200 cases of good cans such as you describe, in good, solid boxes. For these we ask 30 cts. a case. We also have 100 loose cans at 5 cts. each.

These will be good cans, used but once; and on receiving them, if you find any that you cannot use, just throw them out and report to us. Yours truly,

HONEY BOTTLER CO.

The order is sent. Mr. Beeman, being busy at the time the cans arrive, takes a hasty glance at a few cans opened at random, finds them bright and good, is satisfied and stores them away.

In a couple of weeks comes another letter advising of several hundred more cans in stock. Beeman writes that the first lot looks fine, and, if others are as good he says: "Ship us the 100 boxes and 200 loose cans."

The Honey Bottler Co. replies later that they have shipped 100 boxes of cans, 40 cases of which have had maple syrup in them marked XX, and which are good cans, and "we hope you can use them at 20 cts. per case; also 200 loose cans, some of which are not so good, so we include 25 extra ones. Trusting you can use the entire shipment, we beg to remain, etc.

"P. S.—You may throw out any cans which you can not use."

Now, the proper thing to do was to inspect the cans before accepting. However, Mr. Beeman being busy at out-apiaries, leaves strict advice to the agent and draymen not to delay a minute in getting those cans inside the shop. No bees must get at them; hence the cans are piled inside, and, feeling secure of the company's good faith and the clause to throw out any poor ones, Mr. B. waits for a rainy day to inspect the cans.

It rains at last, so to the shop goes Mr. Beeman and helpers armed with towels, a tank of cold water, tub of hot water on a gasoline stove, also hammer and nails to renail boxes.

The first 200 cases tested are satisfactory, barring a dozen with nail holes. Of the remaining 400 cans, over 160 are sour inside, or blackened with an evil-smelling, rusty substance, much unlike maple syrup. About 100 remaining cans are tarnished outside, and hardly fit to use; but Mr. Beeman polishes them up and keeps them, hoping to make a little better report. He very kindly writes the Honey Bottler Co., expressing regrets. They, being very much surprised, and somewhat offended, reply thus in substance. "Enclose shipping bill for 25 cans, which," they add, "ends the matter so far as we are concerned."

Mr. Beeman takes the local bank's cashier down and has him look the lot over. He smells the openings of many cans with appropriate exclamations of disgust. He writes his confirmation of condition of cans and sends it in the same mail with Mr. Beeman's kind repetition of facts.

The Honey Bottler Co. say they now recollect having sent some cans used for maple syrup, and are, therefore, enclosing billing for 75 more loose cans to replace these. The letter closes thus: "The cans we sent you were exactly what you ordered; and if you are not satisfied now, then we certainly shall not do anything further in this matter."

Mr. Beeman calls attention to the matter of freight which aggregated over \$30.00 (no reply); offers to return cans (no reply); writes a sassy letter saying he will take such action as the case justifies (no reply). Honey Bottler has the money. Mr. Beeman has the freight bills and dray bills to pay, and a shop cluttered with cans which, like whited sepulchers, look good outside, but are very bad inside.

The reader may draw his own conclusions, knowing that this firm is rated and well recommended.

My experience in past years has never been quite satisfactory. There were always cans without caps, and cans with holes in them. Frequently cases bought as used but once the past season would have old dates stamped by the railroad company, showing conclusively that, in reality, they were two years old instead of one.

The deterioration of honey cans occurs in ways unlooked for. To begin with, the acid contained in honey acts on the tin. Honey spilled in the melting tank forms a sweetened solution which tarnishes and eventually injures the tinning of the can. If wiped dry the can will remain bright, but this is seldom done.

The bee keeper then fills it with honey; the varying temperature causes a collection of moisture, which frequently rusts the can badly before it is shipped. Can manufacturers do not tin their cans heavily enough to withstand more than a single season's use.

Then we have inside deterioration of cans, which some dealers in cans refuse to acknowledge. Cans containing thin syrup or honey with caps loosely attached will "breathe air," inhaled during falling and exhaling during rising temperatures. Thus in time oxidation of the tin occurs inside as well as out. If the caps are air tight the cans will swell and shrink from expansion or contraction of air, causing an audible snapping, which in time cracks little cross-shaped leaks in the cans.

In conclusion I would say go slow. It doesn't pay to buy second-hand cans as a rule. Good, second-hand cans quickly marketed may be all right. Cheaper cans may serve in certain cases in selling to a wholesale manufacturer where price is a prominent feature. To ship hard looking cans to a mixed trade will certainly cause the loss of customers, no matter how fine the honey inside.

We all desire a deserved reputation for a neat, cleanly, and securely boxed article as well as one of superior quality. If a "kid" handles the honey-gate and the honey spilled is left on the can tops, what will it look like when marketed even in new cans?

Fill the cans to weight yourself; don't spill a drop on the can. It isn't necessary. Then box them up, and either remove at once to a separate room or cover with a cloth, piling five cases high. Don't let bees crawl over cans and cases if they are to look nice. Lastly, don't be stingy with nails. I have never lost a can of honey in my fifteen years of shipping, and I attribute it largely to care in screwing caps tightly, nailing cases securely, and also to the use of caution labels.

Enclosing our product in cheap cans is like dressing in shabby clothes. It gives a bad, if not a wrong impression. Good containers appeal to the average user to the extent of the difference in price, and are fully as convincing in suggesting the quality within as are statements made by the producer.

Mr. Cavanagh's comparison of second hand cans with shabby clothes is very apt. Putting fine, ripe rich honey into old, battered, rusty cans, is like dressing a beautiful woman in dirty rags. The

use of these old cans is decidedly poor business management. One trouble, as our friend says, is that many of these cans are more than *second hand*—they are about *fourteenth* handed. A can that has been cleaned with water or steam is certain to rust, and the use of such a can will give to honey a taste that is almost *putrid*.

The use of bright, new, *shining*, tin cans is a decided aid in selling the honey. Other things being equal, honey so put up stands a better chance of being sold.

FILMS VERSUS PLATES.

Some Reasons for the Superiority of the Latter.

Many of my readers are interested in photography, and one of the questions that they often ask, is whether to use films or plates. I have always used plates, and for reasons given by Louis Derr in an article in the *American Annual of Photography* for 1911. Among other things, Mr. Derr says:

But the film is far from perfection. The individual sheets of the film pack often fail to lie flat during exposure, and the detail of many a picture is marred in consequence, if the exposure is made at full lens opening. Roll films are less subject to this trouble, but it cannot be wholly eliminated except by a tension device. The film costs nearly twice as much as a plate of equal size, and its sensitiveness is less than that of the rapid plates ordinarily used.

In spite of all the efforts of the makers, celluloid is not photographically inert like glass, and developed films show a larger percentage of spots and streaks than plates do—a result not wholly chargeable to the practice of developing a number of films at a time in a tray. Finally, the texture of the image on the film is coarser than that on the plate, thus limiting the size of the enlargements rather closely. In a word, the film is not nearly as satisfactory a photographic product as the plate is.

Films are light in weight, portable, and allow the camera to be loaded in daylight for a large number of exposures—all other advantages are with plates.

ADVANCED BEE CULTURE.

The Bringing Out of a New Edition Calls
Forth Warm Commendation from
Editor Root.

Ever since I have been in the publishing business, I have been more or less handicapped in writing my advertisements. I have always been compelled to praise my own work, which, to me, has been done with a certain sort of repugnance. At last, I am to escape this task, to a certain extent, in the advertising of the book "Advanced Bee Culture" as the publishing and selling of this book has been turned over to the A. I. Root Co. A new edition is now out, and all of the particulars are given in a late issue of *Gleanings*. This notice of the new edition is as follows:

About twenty-five years ago W. Z. Hutchinson, editor of *The Bee-keepers' Review*, was producing comb honey by hiving swarms on frames without foundation. In many respects this was similar to the Simmins non-swarmling plan; but Mr. Hutchinson, apparently, did not have so much in mind the idea of preventing swarming as the production of fancy comb honey, and at the same time save the cost of foundation. His experiments at the time were written up fully in *Gleanings*. These articles aroused so much interest at the time that A. I. Root prevailed upon him to write a booklet describing his system. This appeared in due time, and was entitled "The Production of Comb Honey."

In the meantime, Mr. Hutchinson started *The Bee-keepers' Review*. After this had been running a few years, during which time he took up special topics, the edition of his little book was exhausted, and he was prevailed upon again to write a much larger work, taking in not only his system for the production of comb honey but all these other special-topic subjects as well. The new work, entitled "Advanced Bee Culture," appearing in 1905, was printed and illustrated on the finest enameled book paper. The illustrations were all original, for the author had taken up photography. Some of his photographs illustrating various bee subjects are veritable works of art.

While the work was designed for only a very limited class of bee-keepers, the edition was exhausted some months ago.

Having a good many calls for it I wrote to Mr. Hutchinson, inquiring why he could not get out a new edition. I received back word from his wife that Mr. Hutchinson was sick in the hospital, and had been there some months. After our friend had partially recovered, the thought occurred to me that possibly I myself might be able to revise the book by inserting in their proper places recent editorials that had appeared in *The Bee-keepers' Review*. As there seemed no immediate prospect of his early recovery, I wrote him suggesting that I undertake the work for him, saying that my somewhat extended experience in revising and revising and revising again the various editions of the A B C and X Y Z of Bee Culture might qualify me for a similar work on "Advanced Bee Culture."

JOINING OLD AND NEW.

After some correspondence this was agreed to. The task then devolved upon me of going over old volumes of *The Bee-keepers' Review* since the last edition of "Advanced Bee Culture" had been published, selecting such of the editorial writings as would be suitable to incorporate in the new work, and crossing out old matter that might be in conflict with it. After a few evenings' work (for I had no other time to devote to it) I finally got the matter all together and turned it over into the hands of the linotypers—not until, however, I had submitted to Mr. Hutchinson all the changes that I proposed making and the manner of incorporating the same into the work. I received back a postal card from the sick man, reading something like this: "I marvel at the skill of your selection, and also your manner of joining new matter on to old; in fact, you have made just about such changes as I would have made had I had the strength and the health to do it."

In the line of changes I may say that most of the chapters were so carefully and accurately written at the very beginning that very little change was needed; but the progress of the art had been such in some others that some radical changes were needed. For example, great progress has been made in the matter of producing extracted honey, the treatment of bee-diseases, rendering wax, and wintering bees.

During the years since the first edition of "Advanced Bee Culture" was published, Mr. Hutchinson has had a large experience in the field, especially in out-apiary work. He and his brother Elmer have tested many new devices, as well as having discovered some new kinks to the

trade. The result of all these experiences was written up from time to time in the pages of *The Bee-keepers' Review*, and the task that devolved upon me was to select this matter from the pages of *The Bee-keepers' Review*, and signed articles of his that appeared in the columns of *Gleanings*. All these were woven into the main body of the work.

ACTUAL FIELD WORK.

Some minor changes are made all through the work; but we will speak of only the principal changes. For example, in the chapter entitled "Producing Good Extracted Honey" I have incorporated editorials from *The Bee-keepers' Review*, and a portion of a series of articles by Mr. Hutchinson on the subject of "Producing Extracted Honey," that appeared some time ago in these pages. This new matter has been added to the old in such a way that the whole reads like one continuous story. The new matter deals with the question of extracting the honey, of tiering up and extracting after the harvest is over, securing workers for the harvest, warming up the honey, uncapping barrels and tanks, with quite an extended description of E. D. Townsend's uncapping-box. The steam-heated uncapping-knives and power-driven extractors received their fair share of attention, for, in fact, the Hutchinson brothers tested them quite thoroughly during the last three or four years in their northern apiaries. In fact, this whole chapter fairly bristles with the experience of actual field work. There were, in all, something like fifteen pages added to this one chapter.

THREE CENTS ABOVE MARKET PRICE.

Then we find a little further on, an entirely new chapter on the subject of "Developing a Mail-order Trade for Honey." This is nothing more nor less than a reproduction of an article or articles that appeared in *Gleanings* over a year ago. It takes up the all-important question of how to sell extracted honey, how to advertise, how to secure two or three cents above the market for honey in original packages.

On page 145, under the head of "Foul Brood" appears a discussion of the subject of European foul brood and its treatment, especially how to cure without destroying either the brood or the combs. On pages 154 and 155 is quite a little new matter under the head of "Apiarian Exhibits at Fairs."

The chapter on "The Rendering of Beeswax" is quite extensively revised. A

recent editorial by Mr. Hutchinson describes the W. J. Manley method of rendering wax. As this method is clear up to date in every particular, nearly all the old matter was stricken out, and this new matter was substituted.

Some new matter was added to the chapter of "Outdoor Wintering of Bees," and on page 164 we find another new chapter entitled "Automatic Transferring."

In the chapter on "The Influence of Temperature in Wintering Bees" we find some quite extensive revisions, taking up the special question of how to build bee-cellars at moderate cost. Here again we find the author drawing quite extensively from his experience in building bee-cellars in Northern Michigan. This one chapter, to the one contemplating a bee-cellar, is worth the price of the book many times over.

The remaining chapters contain here and there some changes but no extensive revisions.

The chapters "Fertilization of Queens in Confinement," "Commercial Queen-rearing," and "Ventilation of Bee Cellars" are omitted from the new edition, either because they were out of date or because they conflicted with some of the author's recent utterances as they appeared in *The Bee-keepers' Review*.

REDUCTIONS OF PRICE.

Taking it all in all, the new edition is entirely the work of Mr. W. Z. Hutchinson. While I have acted in the capacity of reviser I have added no word of my own except here and there to put in a connecting link in order that the old matter might join on smoothly to new. Taking it all in all, there have been added between thirty and forty pages of entirely new matter, and something like an equal number have been stricken out, so that the new edition will be about the same size as the old one, but instead of being sold at a price of \$1.20 it will be sold for an even dollar, postpaid.

As a writer on bees Mr. Hutchinson has few equals. For clearness of style and accuracy of judgment he is second to none. His enthusiasm shines forth on every page. His selection of the new and the useful from an extended discussion is intuitive. The last edition of "Advanced Bee Culture," as well as the new edition before, is made up of the best ideas of our best experts on bee culture, properly classified and condensed by a master of the art of boiling down discussions.

I do not hesitate to say that this is one of the most valuable books on bees that

was ever put out; and while its title would indicate that it is designed only for the advanced bee-keeper, yet I am sure that a large number of beginners in the business will find it exceedingly helpful and interesting, especially if they will take it in connection with some other work like the A B C and X Y Z of Bee Culture, or any text-book designed especially for the beginner class.

E. R. Root.

TYPOGRAPHICAL BEAUTY.

Advanced Bee Culture contains the

cream, the summing up, of my apicultural and editorial life. It contains over 200 pages the size of those in the Review. It is freely illustrated with beautiful engravings—the gems of my many years of work with the camera. It is beautifully printed and handsomely bound in cloth; the front cover being embellished with a trailing green vine of white clover decked with white blossoms, from one of which a bee in gold is supposed to be sipping nectar.

Wanted

Early orders for the Old Reliable Bingham Bee Smokers. Address
T. F. Bingham, Alma, Mich.

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50 Colonies in 8 frame hives.
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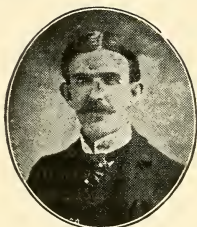
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Standard hives with latest improvements. Danzenbaker Hives Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

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For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTERS. POUDE, Indianapolis, Ind.
859 Massachusetts Avenue.

Good Queens

are a good investment. My Italian queens are reared right; in strong colonies, from the best stock. W. Z. H. has been buying them in years past and will get more this year. No bee disease. Satisfaction guaranteed. June, 90c, 6 for \$4.75, later, 70c. 6 for \$3.75. Less by the hundred, 4-11-11. S. F. TREGO, Swedona, Ill.

Good Bee Supplies

At Low Prices

I have 65,000 section holders that I will sell at \$1.00 per 100, as long as they last. They are nicely made, dovetailed and of the right style for the $4\frac{1}{4} \times 4\frac{1}{4}$ $1\frac{1}{2}$ sections, also some for the 4×5 $1\frac{1}{2}$ sections. I also have a large stock of plain section holders for $4\frac{1}{4} \times 4\frac{1}{4}$, and $4 \times 5 \times 1\frac{1}{2}$ sections.

I have 45,000 Langstroth brood frames at \$1.50 per 100 as long as they last. Some are with V-shaped top-bars, and some with two grooves and wedge. Also some all-wood, or loose hanging frames.

I make the finest polished sections on earth, and want to prove it to you. Call and lots a special. Send for catalog. 4-11-41

Chas. Mondeng, Minneapolis, Minn.
160 Newton Ave. N.

Italian Queens

The most gentle, and beautiful, and the best that money can buy. Unmated, 75 cts.; tested, \$1.00. Write for prices on nuclei and bees by the pound.

C. B. BANKSTON, Buffalo, Texas
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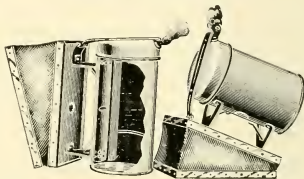
—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

GOLD MEDALS

St. Louis Exposition 1904.
Jamestown Centennial 1907.



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The air forced from the **valveless metal-bound** bellows up and down the fire-grate gives a **combined hot and cold blast**.

The side grate forms a **double wall** for fire, and riveting the braced brackets, fastened to bellows by bolts with **lock nuts**.

The cap is one piece—**can not clog**.

It is the **Largest Smoker sold for a dollar**.

Guaranteed to suit or refund price.

Danz. $3\frac{1}{2} \times 7\frac{1}{2}$ inch Prize Smoker \$1.00; by mail \$1.25. With Bee Keepers' Review, \$1.00 year, and Prize Smoker, \$1.75. Danz. $3\frac{1}{2} \times 6$ inch Victor Smoker, 80c; by mail \$1.00. With Bee Keepers' Review one year, \$1.50.

We send **propolis shields** with Danzenbaker Hives and Supers, and sell anything in the bee line at **factory prices**; also select 3-banded Italian Queens and Bees.

Please send the address of yourself and B-friends for **free catalogs and prices** on Bee Supplies, Bees, Queens, Hives, Supers, Sections and Smokers.

F. DANZENBAKER, Norfolk, Va.
68-70 Woodside Lane

The Finest Honey.

We have the finest honey in Texas. It is from the Castacaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound. F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.
6-10-11

LEWIS BEEWARE

Has no superior, and we can furnish it promptly.
Wisconsin and Dovetailed Hives, Sections, and
everything needed by the bee keeper. Also pure
Italian Queens. Send for catalog. Beeswax wanted.

The C. M. Scott Co., Indianapolis, Ind.

1003 E. Washington Street

SPECIAL

Eight hundred, two-story, 10-frame Root Hives,
new, in the flat, with double covers, in lots of 50,
for only \$1 90 each, f. o. b. Jersey City—regular
price, \$2.35 each. 4-11-11
W. C. MORRIS, Nepperhan Heights, Yonkers, N. Y.

ITALIAN QUEENS, Nuclei, Bees by Pound.
Ten - page descriptive list
ree. Send for it—you have my address, and I have
not yours—before placing your order. Leaflets,
"How to Introduce Queens," 15c; also "Increase,"
15c; both for 25c. 4-11-11

E. E. MOTT, Glenwood, Mich.

Wanted Pure Beeswax. White stating
price and quantity for sale. The
HAM & NOTT CO Limited, Mfrs. Bee Keepers'
Supplies, Brantford, Ontario, Canada.

Situation Wanted by a Christian young
man of 24 to work
in an apiary, with chickens, on a farm. For par-
ticulars address F. E. OSBORNE, 8 East Elm St.
Norwalk, Ohio. 4-11-11

IT PAYS TO USE

DADANT'S FOUNDATION

**A. G. WOODMAN OF GRAND RAPIDS,
AGENT FOR MICHIGAN.**

**DADANT & SONS
HAMILTON, ILLINOIS**

BEEES FOR SALE

I have 100 colonies of bees here at Flint, and there are reasons why I prefer to begin the season with a smaller number.

They are mostly in ten-frame, Langstroth hives, although a few are in eight-frame hives. The hives are all new, made of soft, white pine, and painted with two coats of white paint. Nearly all of the combs are built from wired foundation. The bees are all pure Italians, and mostly of the Superior Stock, or Moore strain. Everything is strictly first-class—could not be better.

Prices for ten-frame colonies are as follows: Less than five colonies, \$7.00 per colony; five colonies, or more, but less than ten, \$6.50 per colony; ten or more colonies, \$6.00 each.

Eight-frame colonies, less than five, \$6.00 each; five colonies or more, but less than ten, \$5.50 each; ten or more colonies \$5.00 each.

The bees will be shipped by express, in May, about fruit-blooming time, and safe arrival in perfect condition guaranteed.

W. Z. Hutchinson, Flint, Mich.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to *Gleanings in Bee Culture*—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

D. Cooley can fill your orders with the
A. I. Root Company's

STANDARD BEE SUPPLIES

On short notice. Catalog free.

D. Cooley, Kendall, Mich.

ITALIAN BEES and Queens and supplies. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-11t

Good Queens

My 14 years of experience enable me to know what good queens are, also how to rear them. I can furnish three- or five-banded golden Italians, reared in strong colonies and mated in three-frame nuclei. I have five different strains, so there will be a direct cross in the matings. Orders can be filled now by return mail at the following prices: Untested, \$1.00; six, \$4.50; twelve, \$8.00. Tested, \$1.50; six, \$7.50; twelve, \$13.00. Breeders, \$5.00. Three-frame nucleus \$3.00. Add price of queen wanted.

A. B. Marchant, Sumatra, Fla.

New Catalog Now Ready

Of Dovetailed Hives, Marshfield Sections, Dittmer's Foundation and all kinds of bee keeper's supplies at Reduced Prices, (car loads in stock). Also all kinds of Berry Baskets, Hallock Cups, Hallock Boxes and Crates to match.

Honey and Beeswax Wanted, Wax 30c.

W. D. SOPER, Jackson, Mich.

323-325 S. Park Ave.

1-11-8t

A Post-Card Projector

A year ago San'a Claus brought my eight-year grandson, Bruce Hanneman, what is called a post-card projector. By means of a powerful light, any bright picture the size of a postal may be greatly enlarged and thrown upon a screen. If you have a Youth's Companion premium list, you will find this projector illustrated and described, only the one that we have uses a 32-candle power electric light, instead of gas. This is a very interesting toy for children, but my grandson has played with his so much that he has tired of it, and he came to me and said: "Grandpa, couldn't we advertise this in the Review, and sell it, and then take the money and buy something else?" So I'm trying. It cost \$3.50 new, and is just as good now as the day it came, but we will sell it for only \$2.50. Shipping weight 4 lbs. Must go by express, and charges paid by receiver.

W. L. Hutchinson, Flint, Mich.



are our specialty. We furnish such extensive bee keepers as E. D. Townsend and others. Consider getting your bees into Protection Hives this fall. Give us list of goods wanted.

A. G. WOODMAN COMPANY

GRAND RAPIDS, MICHIGAN

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

For the Asking

My catalog of Poultry, Bees and Supplies, including special offers at bargain prices. Shall I hear from you?

H. S. DUBY, St. Anne, Ills.

Camera For Sale

I wish to sell my camera, and I'll tell you why. My health, the condition of my heart, will not allow me to lug any heavy loads in the future, and an 8 x 10 view-camera, with tripod, plate holders and plates makes quite a lug. After such a camera is once on the spot, it is decidedly superior for the making of superb photos, but I must be content with something a little smaller and lighter—possibly to use films instead of glass plates. To one who is to do most of his work at or near home, or who is strong and rugged and able to carry the camera if necessary, nothing is better than a camera like mine. I have had it several years, but have always used it with care, and it would be almost impossible to distinguish it from an instrument right from the shop. It is the Empire State, made by the Rochester Optical Co., of Rochester, N. Y. It has all of the modern improvements, such as rising and falling front, horizontal and vertical swing, etc. My entire outfit, and the cost is as follows:

Camera.....	\$28.00
Rapid Rectilinear Lens.....	20.00
Folding Tripod.....	3.50
Low Shutter.....	4.50
6 Double Plate Holders at \$1.85.....	11.10
14 Inside Kits for using smaller plates at 40 cents.....	5.60
Ray Filter.....	3.00
Canvass Carrying Case, Felt Lined.....	3.50

Total \$79.20

I would sell the entire outfit for \$50.00, and the man who buys it would get no better if he bought direct from the manufacturer, and paid about \$25.00 more for it. Any questions cheerfully answered.

W. Z. HUTCHINSON, Flint, Mich.

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of 5 to 7 cents per gallon. Process by mail \$1.00

C. W. Dayton, Chatsworth, Calif.

A NEW CREATION
WEBSTER'S
NEW
INTERNATIONAL
DICTIONARY

THE MERRIAM WEBSTER

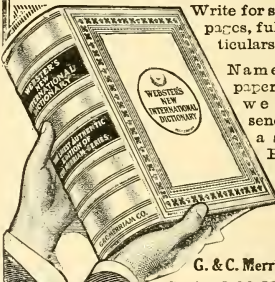
The Only New unabridged dictionary in many years.

Contains the pith and essence of an authoritative library. Covers every field of knowledge. An Encyclopedia in a single book.

The Only dictionary with the New Divided Page.

400,000 Words. 2700 Pages. 6000 Illustrations. Cost nearly half a million dollars.

Post yourself on this most remarkable single volume.



Write for sample pages, full particulars, etc.

Name this paper and we will send free a set of Pocket Maps

G. & C. Merriam Co.
Springfield, Mass.

Electric Motor For Sale

We sold our printing office last summer to a firm already equipped with motors, hence they had no use for our motor, and it is still on hand. Here is a description: It was manufactured by The General Electric Co., it is type C. A., continuous current, of 500 volts, speed 2,000 revolutions per minute: $\frac{1}{2}$ horse power. There is also a starting box and speed controller, which allows the motor to be run at different speeds. The entire outfit cost us \$55.00, and is exactly as good today as when we bought it, yet we would be glad to sell it for \$25.00.

W. Z. Hutchinson, Flint, Mich.



If you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent, when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 10 to 11c; beeswax, 30c.

Feb. 16

BLAKE-LEE CO
4 Chatham Row

NEW YORK CITY—We quote white clover and basswood at from 9½c to 10c per pound; light amber, 8½c to 9c per pound; mixed and buckwheat, 6½ to 7c per pound; West Indian and Southern, average quality, 70c to 75c per gallon. Southern light color, 80c to 85c per gallon. Beeswax, quiet at from 29c to 30c per pound.

Feb. 16

HILDRETH & SEGELKEN,
82 Murray St.

CHICAGO—Extracted honey is scarce and anything of basswood or clover grades is in demand. We quote as follows: Fancy white, 17c to 18c; No. 1 white, 15c to 16c; fancy amber, 12c to 13c; No. 1 amber, 10c; fancy dark, 9c; No. 1 dark, 8c; white extracted, 9c to 10c; amber, 8c to 9c; dark, 7c; beeswax, if clean, 32c.

Feb. 15

R. A. BURNETT & CO.,
199 S Water St.

CINCINNATI—Demand for comb honey has slackened up to such an extent that those who have any on hand are sacrificing it in order to get rid of it. On the other hand, it does not seem as if the trade is craving for honey in the comb at this time of the year. Extracted honey is not moving as freely as we expected, nevertheless, for strictly fancy we are getting from 9c to 10c in 60-pound cans, two cans to the crate, according to the quality and quantity bought. Amber honey in barrels from 6½c to 8c per pound. We are paying 30c cash or 32c in trade for nice, bright yellow beeswax, free from dirt.

Feb. 6

THE FRED W. MUTH CO.

KANSAS CITY—The demand for comb and white extracted is good. The demand for amber extracted is very light. Beeswax good demand. No. 1 white, per case of 24 sections, \$5.50; No. 1, amber, \$3.25; No. 1 dark, \$2.75 to \$3.00; white extracted 8½ to 9c; amber, 7 to 7½c; beeswax, 28c to 30c.

Feb. 16

C. C. CLEMONS PRO. CO.

TOLEDO—The demand for honey is normal for this time of the year. There is a fair demand for white comb honey, and stocks seem to be large enough to supply the demand. We have some calls outside for comb honey, which would indicate a shortage in some markets. Extracted is in good demand and not much is being offered. Beeswax is firm and demand is good. Selling prices are as follows: Fancy white, 16c to 17c. No. 1 white, 15c to 16c; fancy amber, no demand; white extracted, 8½ to 10c; amber, 6½c to 7c, beeswax, 30c to 33c.
Feb. 15

S. J. GRIGGS & CO.,

ROOT'S GOODS

For Western Pennsylvania. Liberal early order discounts. Gleanings and choice queens

GIVEN AWAY

Write at once for circular. Time is limited.

GEORGE H. REA, Reynoldsville, Pa.
Successor to Rea Bee and Honey Company

11-10-11

To you who buy

QUEENS

We breed Carniolan, 3-Band Italians, Caucasians and Goldens. Ready to mail April 15. Order now to insure your queens when you need them. Address **JOHN W. PHARR, Berclair, Texas.**

2-11-11

Situation Wanted By a young man who has successfully passed examination after taking course of lectures and practical work in Apiculture at the Ontario Agricultural College. Anyone desiring help of this kind for the season of 1911, kindly correspond with **M. J. Pettit, Provincial Apiarist, Ontario Agricultural College, Guelph, Canada.**

2-11-11

THIS BRAND MEANS BEE SUPPLIES

Scientifically Made

OUT OF

GOOD MATERIAL

TAKE NO OTHER



**30 DISTRIBUTING HOUSES
SEND FOR FREE ANNUAL
1911 CATALOG**

GIVING NAME OF NEAREST ONE

G. B. LEWIS CO.
WATERTOWN, WIS.

Gleanings in Bee Culture

For 1910-11

This is a busy world full of busy people. It is impossible to read all the good literature that is published on bees to say nothing about the general literature on other subjects. In order to help out those who are cramped for time we are entering upon a new department in journalism by introducing what we call—

Moving Pictures of Prominent Bee-men at Work

These will consist of a series of photographs showing some of the best apiarists in the country at work among their bees. Each little step and their manner of handling from the time of putting the bees into winter quarters to the time of taking off the crop the following season, will be shown. Each of these separate poses is numbered consecutively, and all the busy reader will have to do is to take a rapid glance at these pictures. Then, if he is interested and desires to know more about it, he can read the descriptive matter that goes with the pictures.

How These Moving Pictures Were Obtained

We sent a special representative, equipped with the finest Graflex curtain-shutter camera with an imported lens, to the apiaries of two or three of the prominent bee keepers. A series of photographs were taken at each of their yards. For example, we have something like one hundred different pictures showing **E. D. Townsend among his bees**, and just how he performs some of the tricks of the trade, that it is practically impossible to describe on a printed page. We also have something like one hundred photographs showing that prince of fancy comb honey production, **Mr. S. D. House, among his bees**. While he could write a volume telling how he produces fancy comb honey, nothing would begin to show just how he proceeds, so well as a series of pictures, showing each successive step. Besides all this, Mr. House will be shown in the act of performing other tricks of the trade.

Irving Kenyon, one of Mr. House's pupils, will show a scheme for screening a honey house; how to open the screen door when the hands and arms are loaded down with supers or hives.

Mr. E. M. Gibson, of Jamul, Cal., and O. B. Metcalfe, of Mesilla Park, N. M. will also furnish us moving pictures of their work among their bees.

Besides these special illustrated articles we shall have the usual grist of general bee matter departments and other ordinary illustrated matter, all of which will make Gleanings for the coming year the brightest and best it has ever been.

Our Special Inducements

To get old subscribers to renew early, so as not to have any lapse in their journals we will make this special offer, to send half a pound of yellow-sweet clover seed, *Melilotus Indica*, postpaid. Do not forget that in order to get this seed **free you must send \$1.00 before your subscription expires.**

To encourage old subscribers to secure new ones we will send a one pound package post paid, of this yellow-sweet-clover seed to every one who will send us \$1.00 for a new subscriber.

Yellow Sweet Clover (*Melilotus Indica*). What is it?

This we believe is a very remarkable honey plant. We have been fortunate, we believe, in securing all the seed that is obtainable in the United States, and **we now have on hand something like a carload.** The yellow sweet clover that we have to offer has all the appearance, so far as leaf and blossom are concerned, of the white clover, *Melilotus alba*, except that the plants do not grow quite so tall and that the blossoms are yellow. **It is an annual, grows readily from seed, and blooms the first season and much earlier than the ordinary variety of yellow sweet clover, *Melilotus officinalis* and much earlier than the ordinary white sweet clover.** It is, therefore, a very valuable forage plant to introduce. Sweet clover, whether yellow or white, is coming to be recognized by prominent agriculturists all over the country as being most valuable for stock, almost the equal of alfalfa. It has the advantage over alfalfa that it will grow anywhere; and after it has inoculated the soil it will then be possible to grow alfalfa or anything else.

Do Not Delay Ordering

While we obtained a large quantity of seed, do not make the mistake of waiting too long; for by the time our subscription season fully opens up we expect to be swamped with orders.

The A. I. Root Co., Medina, Ohio

MAY, 1911



Flint, Michigan, \$1.00 a Year

THE ASPINWALL

NON - SWARMING BEE HIVE

Now a practical and commercial success after 22 years of experimentation.

Will DOUBLE the YIELD of COMB HONEY.

Every bee keeper should satisfy himself as to our claims by ordering, at least, one sample hive and testing it.

Descriptive circular with prices mailed free. Address the makers,

ASPINWALL MANUFACTURING CO.

601 Sabin St. Jackson, Mich.

Canadian Factory - - Guelph, Ont.

World's Oldest and Largest
Makers of Potato Machinery

Larva Transplanter

You can combine EVERY advantage of ALL the best known queen-rearing systems by using the

EUREKA LARVA-TRANSPANTER

described in Gleanings, Dec. 1st, pages 765-6.
Price fifty cents, postpaid. 5-11-1t

Mark W. Moe

1716 Exposition Ave., Denver, Colo.

Bees For Sale

About 90 colonies of thoroughbred Italians and high bred bees in patent hives, combs in excellent condition. 111 empty hives with frames filled with combs in perfect shape for extracting. 200 supers for comb honey. 115 tin hive covers, 200 queen excluder boards, and about 3,000 sections partly filled with comb and foundation. Also many other supplies, etc. Reason for selling—other business will not allow me to give the proper attention. So, for this reason, have decided to sell and will give some one a bargain on the entire outfit. For further particulars, either call phone, or write

D. L. Laur

1101 S. Washington Ave., Saginaw Mich.

5-11-1t

Bee Keepers

We make the best polished, and have the whitest section. This signifies quality. Get our prices. Prompt shipments. We have a full line of Bee Supplies. Send for catalog.

AUG. LOTZ & CO., Boyd Wis.

5-11-4t

National Bee Keepers Association

Objects of the Association.

To promote and protect the interests of members.

To prevent the adulteration of honey.

GEO. W. YORK, Chicago, Ill.,

President.

W. D. WRIGHT, Altamont, N. Y.

Vice-President.

LOUIS SCHOLL, New Braunfels, Texas.

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J. E. CRANE, Middlebury, Vt.

E. F. ATWATER, Mered an, Idaho

Annual Membership \$1.00.

Send dues to Treasurer.

Names of Bee-Keepers

TYPE WRITTEN

The names of my customers, and of those asking for sample copies, have been saved and written in a book. There are several thousand and arranged alphabetically (in the largest States, and, though this list has been secured at an expense of hundreds of dollars, I would furnish it to advertisers or others at \$2.00 per thousand names. The former price was \$2.50 per 1000, but I now have a typewriter, and by using the manifold process, I can furnish them at \$2.00. A manufacturer who wishes for a list of the names of bee-keepers in his own State only, or possibly in the adjoining States, can be accommodated. Here is a list of the States and the number of names in each State.

Arizona 46	Ky..... 182	N. C..... 60
Ark.... 82	Kans.. 350	New Mex 54
Ala.... 80	La..... 38	Oregon... 106
Calif... 378	Mo..... 500	Ohio.... 1304
Colo.... 228	Minn... 334	Penn.... 916
Canada 1200	Mich... 1770	R. I..... 46
Conn... 162	Mass... 275	S. C..... 40
Dak.... 25	Md..... 94	Tenn.... 172
Del.... 18	Maine 270	Tex..... 270
Fla.... 100	Miss... 70	Utah..... 68
Ga.... 90	N. Y.... 1700	Vt..... 205
Ind.... 744	Neb.... 345	Va..... 182
Ills.... 1375	N. J.... 130	W. Va.... 178
Iowa... 800	N. H.... 158	Wash.... 122
		Wis..... 620

W. Z. HUTCHINSON, Flint, Mich

PATENTS START FACTORIES



We Secure Patents. NO FEE IF WE FAIL.
Start right. Free book—How to obtain, finance and promote patents. Send sketch or model for free search.
FARNHAM & SUES, Pat. Attys., WASHINGTON, D. C.

5-11-4t

Now for 1911 Bee Supplies

We have already received several carloads of that "finest of all Beeware"—Falconer make, anticipating the heavy rush of orders sure to come this Spring. Prepare yourself NOW. Brother, for we are going to have a heavy honey yield this season, and those who order early are the ones who will profit most. Send for our catalog today and see our "MUTH SPECIAL" Dovetailed Hive and also our "IDEAL METAL" Cover both dandies. We sell you cheaper than the rest; we have the best. Let us figure on your wants—we will surprise you.

The Fred W. Muth Co.

51 Walnut St.

"The Busy Bee Men"

Cincinnati, Ohio

EXTRACTOR FOR SALE.

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame, (Langstroth) Root Automatic, reversible, No. 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$22.00, and it has been used only two seasons and is practically a new machine.

W. Z. HUTCHINSON, Flint, Mich.

We are in the market for

HONEY

Both comb and extracted. State quantity you have to offer, with full particulars.

HILDRETH & SEGELKEN

265-267 Greenwich St., New York

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

SAWS

in making their hives, sections and boxes.

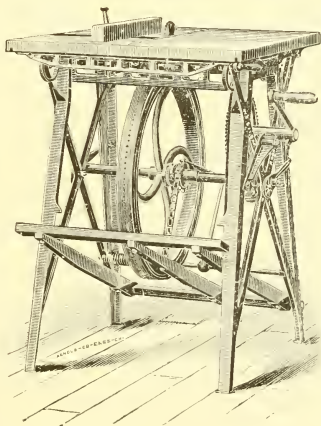
Machine on trial. Send for Catalogue

W. F. & Jno. Barnes Co.

351 Ruby Street

Rockford, - Illinois

4-09-16t



MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

Marshfield Mfg. Co.

Marshfield, Wis.

No Fish-Bone

Is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,

Canajoharie, N. Y.

Let us hear from you, if
you want anything in the

BEE SUPPLY

OR

POULTRY SUPPLY LINE

Write for our

FREE CATALOGS

C. H. W. WEBER & CO.

2146 Central Ave.,

CINCINNATI, OHIO

1911 Catalog of

“falcon”

**Hives, Sections, Foundation
and Complete Line Ready**

Write for your copy

FALCONER, N. Y., just south of Buffalo, directly opposite Detroit is the location of our factory. Quick time and low freight to bee keepers in the Detroit district.

CHICAGO, ILL., 117 Jefferson St., branch with complete fresh stock, makes rush shipments to Central, Western and Northern Michigan bee keepers.

W. T. Falconer Mfg. Co.

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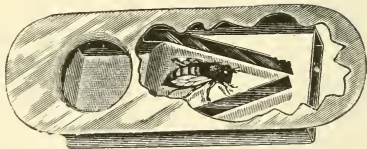
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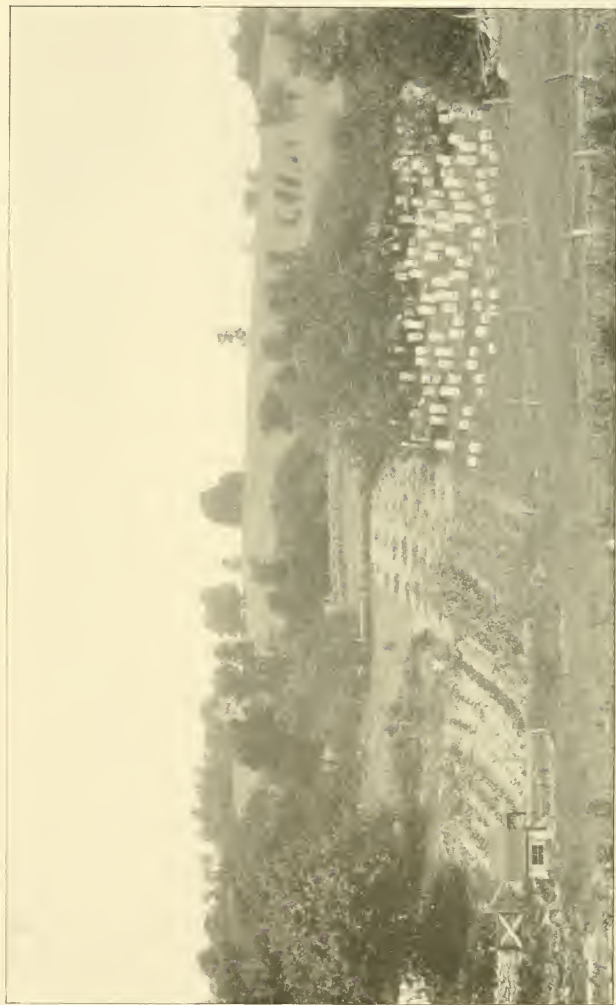
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J. E. HAND

Birmingham, Ohio, U. S. A.



Apiary of D. R. Hardy, Burrs Mills, New York.

The Bee Keepers' Review.

A MONTHLY JOURNAL

Devoted to the Interests of Honey Producers

\$1.00 a Year

W. Z. HUTCHINSON, EDITOR AND PUBLISHER

VOL. XXIV.

FLINT, MICHIGAN, MAY 1, 1911.

NO. 5

Methods and Plans that will Result in the Least Amount of Swarming.

D. R. HARDY.



THE above subject is, I believe, of vital importance to the extensive honey producer; but so much has been said and written on this topic by "*Top Liners*" in the business, that it seems almost out

of place for me, a comparative beginner, to advance any ideas that I may have tried to work out; and I would not venture to do so, were it not at the earnest request of Bro. Hutchinson. My position might be defined as follows:

We cannot reach perfection's goal alone
We must measure other's methods with our own;
Exchange ideas, read bee magazines, and then,
Gain more knowledge, touching elbows with our fellowmen.

I have yet to meet that bee keeper who can adopt a rule or method, and not be obliged to deviate from said rule or method under certain conditions; but it

must be conceded that there are certain fundamental principles that must be adhered to if we expect to succeed as honey producers. The natural tendency of a colony of bees with a good prolific queen at its head, is to cast a swarm at, or a little before, the main honey flow.

Time was when most bee-keepers, and some good ones, too, did not consider that their bees amounted to much unless they swarmed liberally. At the present time, however, especially in Northern New York, bee-keepers who have studied conditions carefully are fast becoming convinced that the strong, prosperous colonies, those that do not cast swarms, are the ones that deliver the goods; and it is the opinion of the writer that it is perfectly practical to so manipulate the colonies in our apiaries that we will eliminate, to a large extent, the swarming impulse, and the question often asked is, how to do it with the least expense in time and labor.

The desire to swarm is generally caused by an over-crowded condition existing in the brood chamber. It may be caused

by a sudden flow of nectar from dandelion or apple, or other early blooming flowers, which the bees have stored in the combs, or if we have had a light, steady flow for two weeks or more (just enough to keep the queen laying a good smart clip) we will find six to eight frames of almost solid brood. With either of these two conditions existing there is liable to be something doing if we should get a sharp flow of clover nectar at this most critical time.

BREED ALL THE QUEENS POSSIBLE FROM
MOTHERS THAT SHOW THE LEAST DESIRE
TO SWARM.

I do not believe that we will ever see the much sought after non-swarmer strain of bees, but I do believe that by careful breeding for this particular trait we can produce wonderful results in this direction. I bred last year fifty queens from a mother that has for two seasons showed no desire to cast a swarm, and at the same time produced 150 pounds of comb honey each season, with no help on my part in the way of manipulation, etc. Less than 30 per cent of 85 colonies in my apiary showed any desire to swarm last season, and produced nearly four tons of white honey; and I will here state that the bees are the Carniolan—Italian hybrid, said to be bad swarmers.

EXTRACTING SUPERS A GREAT BENEFIT AT
BEGINNING OF SEASON.

Herein lies, I believe, a solution to the honey clogged brood chamber problem. If our colony happens to be of just sufficient strength to gather honey, and not strong enough to build comb, the bees will not enter boxes and draw comb on foundation; but put on a super of extracting combs, and up goes the honey out of the way of the queen.

I have known cases where bees absolutely refused to go up, (strong colonies, sometimes) that would begin operations in extracting combs in 10 minutes after they were in place. By the time that this first super is nearly full it can be raised up and sections put under if desired.

BOTTOM VENTILATION ESSENTIAL.

There is an old adage that

"It's a poor rule that won't work both ways."

Let us apply it to the bees: If we can force a colony to swarm by contracting the entrance, why can't we go somewhat in the other direction by enlarging it, and produce an *opposite* effect?

I have always contended that fresh air was beneficial as well as necessary for bees as well as mankind. The ventilator I use is a wedge-shaped stick which can be shoved under the front of hive more or less as the occasion requires.

DEQUEENING AS A LAST RESORT.

Now, after we have exhausted all of the above stunts, or, in other words, done all we can to keep the family together, and we discover that a colony is *determined* to swarm, there yet remains another plan, that of dequeening, or taking away the queen; which should be done at once, together with a frame of hatching brood, and placed in a hive on a new stand which later in season can be used for mating nuclei; or, if we wish to retain the queen for another season, we can add combs, and build up for winter. In six days we will return to the colony from which we took the queen and either cut out all cells and introduce a virgin queen, or leave one cell and let them raise one. I prefer the latter method; and if the queen is not desirable she can be replaced later in the season by another.

Dr. Miller, in February, 1909, Review advocated what he called the "put up" plan, that of taking the queen with a frame or two of brood and putting them in an empty hive on top of a colony from which they were taken and either return the queen to said colony in ten days or introduce a young laying queen. These methods never were a success with me as they invariably swarmed out.

In concluding this article I must try and impress the reader that we bee-keepers in this section of New York state usually get what honey we do get, as a surplus in two or three weeks, and what we do

in the way of manipulation must be done at the right time. This keeps us on the lookout for breakers at all times, and we are in something of the same position as the traveler who asked the farmer which of two roads was the best to take. The farmer answered by saying that which ever one he took he would wish he had taken the other. So if we as bee-keepers adopt a plan, weather conditions may convince us we have made a mistake.

I have at present 165 colonies, all in No. 1 condition. I expect to put them on

their stands in a few days. For the past few years I have set my bees out by moonlight. It works to perfection and I intend doing the same this year. I practice spring stimulation feeding, using Alexander feeders. In cool weather I close up the entrances with sawdust, thus saving the lives of many bees that would otherwise leave the hives never to return. I may be expecting too much, but, if the coming season is as good as last, I can easily count on eight tons of comb honey.

BURR'S MILLS, N. Y., March 4th, 1911.



Important Points to be Considered in Producing Comb Honey on a Large Scale.

ADRIAN GETAZ.



IT cannot be denied that it is far easier to produce extracted honey on a large scale than it is to raise comb honey. On the other hand, in many localities, mine for one, the difference in price and the larger demand

make it almost a necessity to produce comb honey rather than extracted.

The next question, when operating on a large scale, is, unquestionably, how to minimize the work without lessening the returns; or, at least, not enough so that one would lose more than he could gain. This may depend a good deal on the locality. In a good locality a few pounds more per colony might be gained by using a more elaborate management, but the larger number of colonies that the apiarist could work with a simpler system would more than make up for the differ-

ence. In a poor locality, where the few pounds gained might constitute the biggest part, or, perhaps, the *whole* of the surplus obtained, the question is altogether different.

But any one who contemplates bee keeping on a large scale should select a good locality, and this contribution will be written from that stand point.

SIZE OF HIVES.

Use a full-size hive. I mean the brood-nest. One large enough to allow the queen all the space she may need. Put that hive in place and leave it there all the summer, at least; and all the time if you winter them out of doors. You want a hive of the Dadant or Jumbo size. A twelve-frame L size is too wide; the brood nest is too much out of the proper shape. The queen is liable to go in the sections at any old time, and the bees will often put pollen there. The supers are too large to be handled easily, and often would be larger than the bees can well keep warm in the early spring. The

Dadant hive is not well adapted to comb honey work. Something like the Jumbo, or a Draper barn, would be needed.

You don't want a double story brood-nest. To put out a first story, then add a second later, then take it away, sorting out the combs, and putting those with brood in the story left, having the others to take care of and protect from moths and rats, is too much work. It will never answer when keeping bees by the hundreds or thousands of colonies.

Cut that out! I say, cut that out *altogether*.

Some will say that it might happen that such a brood nest would not be full when the main flow comes, and then the bees would put lots (?) of honey in the brood nests instead of in the sections and add almost dramatically, "We want every drop of honey in the sections," or something to that effect.

You do, eh? Well, what I want to know is how the bees are to put honey in the sections when there is nothing there but foundation and probably only small starters at that. It takes about three days to start wax secreting, and about three more until enough comb has been built to any appreciable amount. During that time the bees have either to be idle, or put in the brood nest whatever they gather. So, after all, what is there is clear gain, and will be very useful when next winter comes along.

SHAKING OR REQUEENING.

I am emphatically in favor of requeening instead of shaking or dividing to prevent swarming. Dividing requires an extra set of hives which is quite an expense when working on a large scale. Then extra combs have to be taken care of. But that is not the most important point. In the process as used nowadays all the combs are carried to a new stand and the colony has to rebuild a new brood nest. That means a certain quantity of honey to be consumed to produce the necessary wax, and, what is worse, quite a number of bees are engaged to do the work instead of going to the field and working in

the sections. In my locality that means about thirty pounds of honey on an average. As these thirty pounds very often constitute my sole surplus, or nearly so, there is no wonder that I should object to a system of management involving that loss.

PREVENTION OF SWARMING.

It is a question very much debated as to how the prevention of swarming is to be managed. Some go over their colonies every eight or ten days to ascertain which ones are preparing to swarm, and deal with them accordingly. That is entirely too much work, and should be dispensed with altogether. Cut *that* out.

Others will requeen (or divide) the whole apiary at the proper time and be done with the thing once for all. That is all right where the swarming comes all together, or nearly so, at a certain definite time, and where nearly all the colonies would likely swarm. In my locality that kind of proceedings does not work. There is no very definite time for the bees to swarm, the entire period during which they *may* swarm is at least six weeks.

Usually only about one-fourth, at most, of the colonies do actually try to swarm. Treating four colonies to prevent one from swarming is rather a waste of time. Furthermore, the ones which have, not contracted the swarming fever give far better returns when left undisturbed.

So, I finally decided on putting queen traps on all the hives and let them swarm if they wish to. Of course, the swarms, being queenless, return. The queen is usually found in the trap and is either removed or caged, the cage being placed in the center of the hive in order that she can be fed by the bees. The queen cells are destroyed, except two or three which are caged. A week later, whatever queen cells have been started are destroyed and the best of the young queens (from the caged cells) is turned loose and all the others destroyed or used elsewhere. The queen trap is left two or three days longer, because, if some queen cells had been overlooked, swarming might occur.

It is then removed to permit the young queen to mate.

One or two remarks can be made here. The old queen could be removed instead of caged; but as far as I can see, the bees work better with a queen, caged or not, than without. On the other hand, the colony does decidedly better work with a young queen than with the old one; that is, as a general rule.

Evidently a queen from some other colony can be introduced in the place of one of their own rearing, but in such cases, care must be taken to not introduce her too soon. The colony must be four or five days without unsealed brood, before a queen is released or introduced, otherwise swarming would occur again.

SUPERS.

My hives and supers are home-made. The majority of them are 17½ inches long inside, giving room in the supers for just four sections in each row. Instead of section holders, I use plain strips of wood 1½ inch wide; the sections are plain sections of the same width; strips are also placed on the sections and the posts of the fences are long enough to reach clear through both strips. This arrangement permits a very rapid filling or emptying of the supers. Furthermore, it reduces cleaning to a minimum, as the sections are protected on all the sides. Only the edges need cleaning, and, usually one or two sweeps of a joiner's scraper on each side is all that is needed.

DOUBLE-WALLED HIVES.

I use, exclusively, double-walled hives. Not only the hive proper, but the supers and covers as well. They are not much heavier than single-walled hives. The lumber used is only ½ inch thick. The space between walls is 1½ or 2 inches wide, and filled with light packing, excelsior or straw being the best. The stiffness of a double-walled hive is secured by the strips at the top and bottom of the walls, hence the possibility of using thin lumber,

These hives have many advantages. In

my locality the bees winter better than in single-walled hives. The protection to the brood in the early spring is invaluable. What is almost as valuable is the protection to the first super put on in the early spring, which, in many localities, must be done at a time when the weather is yet quite cool.

That is not all. When the hot weather comes, the double walls and covers with packing protect from an excess of *heat* as well as the excess of cold. The heat of the sun cannot penetrate readily through such walls, and accumulates in the packing, which, in turn, helps to keep the hive warm during the night. This is a much more important item than most people would think. Go to your hives before daylight, after a cool night, and you will often find the supers entirely deserted. That means a considerable loss of surplus. Under favorable circumstances, the comb building and other work will go on during the night as well as during the day, and if it does not, there will certainly be a loss.

Another advantage of having full sized brood nests is that there is room enough for all the food needed, and all the room for egg laying, until the bees can gather enough to supply their wants. It does not take much honey merely to feed the bees during the winter; it is the rearing of brood in the early spring that consumes the stores so fast. An eight- or ten-frame L. size hive has not room enough for both purposes. The result is that it is necessary to feed in the spring if room enough is left in the fall for breeding purposes. I say use full size brood nests and cut out the spring feeding.

THE WHY AND WHEREFORE.

But somebody will say: If a large brood nest has so many advantages over one made of two bodies, why is it that they are so little used?

While they are so little used here they are used extensively in Europe. There the full sized Dadant hive is considered among the smallest that can be tolerated.

Here it is different. When A. I. Root began the hive making business, a single story eight, or, at most, ten L frames, was considered sufficient. Later, it developed that it was not so; but the beekeepers had already their hives made of

that size, the manufacturers objected strongly to the introduction of a third pattern, so all the efforts made have been in view of using two-story hives. But it is only a makeshift, and a poor one at that.

KNOXVILLE, Tenn., Jan. 1, 1911.



42,000 Pounds of Honey, Mostly Comb, from Alsike Clover and Good Management.

J. E. CRANE.



FRIEND Hutchinson: I have been much interested in the late numbers of the Review, but nothing has interested so much as to learn of your improved health, and I hope you may fully recover

your strength and vigor of former years. We have had an exceedingly busy season, with a crop of some 37,000 pounds of honey; about two-thirds of it comb honey, besides buying a good many thousand pounds more, and packing much of it for market.

Our stock of bees was not large this year—less than 600 colonies. Four years ago with about 650 colonies in the spring, if I remember rightly, we had not far from 42,000 pounds, about three-fourths comb honey. We now have a stock of nearly 800 colonies, and know of no reason why our crop the coming season should not be much larger than that of four years ago, which was the largest crop we have ever harvested.

Formerly one of our principal sources of honey was basswood, but some twelve years ago, we had an epidemic of forest worms that for two years in succession destroyed the leaves of basswood and other trees, since which the basswood has

seemed to give very little honey; and, during the last five or six years the lumbermen have pretty nearly finished the basswood. Strange to say, however, our crops of honey have been quite as large as before.

GREAT YIELDS FROM ALSIKE CLOVER.

I presume this comes in part from better methods of management, and in part from the increased acreage of alsike clover. I began sowing alsike seed in 1867, paying \$1.20 per pound for it, which was, I presume, the first sown in this state. Last spring I suppose some 5,000 pounds of alsike clover seed were sold by the seed dealers of our village, to say nothing of the amount sold by dealers in surrounding towns, nor of the immense quantity of seed that was scattered while gathering the hay crop the past summer. Last spring was wet and cool, just right for clover, and alsike clover came into bloom as I have never seen it before, even in old meadows that have not been plowed for many years. It seemed as though some good angel had hovered over the earth and sowed the seed everywhere, even on farms where the owners were quite too penurious to buy the seed. Two or three hundred acres of this kind of clover in range of each yard of bees gives one a very comfortable feeling, and I find we are in danger of forgetting to pray. "Give us this day our daily bread." We have had but comparatively little white

clover honey the past three years, but the rains the past summer and autumn have brought it in so it looks as though the future was sufficiently rosy to satisfy even the most pessimistic bee-keeper in this section.

Of course there will be seasons when the flowers will yield nectar very sparingly, and the timid may be discouraged, but, on the whole, it seems to me that the outlook is cheerful to say the least.

ONLY ONE POOR SEASON IN FIVE.

I find in looking over the past forty-five years that I have kept bees, that we have on an average about one poor season in five, and, to match this, one extra good year in the same time, although they do not come with regularity. Besides, I have learned that the intelligent and enterprising bee keeper can do much in turning a poor season into a very fair season as you illustrated in the December Review, in the management of your home yard of bees last spring.

WINTER DEVOTED TO SELLING HONEY.

Our honey is sold mostly in Eastern New England, where only a small amount is produced, and prices range from 16

cents for number 1, or fancy, to 14 cents for number 2, comb. Our extracted we put up in quart, gallon and five-gallon tin cans, and also in quarter, half, and pound glass containers, that sell from ten cents up. It is a good deal of work to put up honey in small packages, but in winter we are not crowded with other work, and it is better than doing nothing.

This year we have sold more or less honey that has gone West, where the crop is light. We have also sent considerable extracted honey across the water to Europe.

Speaking of the crop of honey the past season, our county has produced, as near as I can estimate it, some sixty tons of surplus honey, almost wholly comb, and I suppose as much more might have been harvested on the same ground, if there had been bees to do the work.

By the way, I was much interested in the reply of the doctor in the hospital to the patient who thought the doctors too particular, "We don't *guess* at things here; we find out *definitely*." Wouldn't that be a pretty good motto for bee keepers. It is a good thing to *know definitely*.

MIDDLEBURY, Vt., Dec. 21, 1910.



Some Methods of Securing Shallow Extracting Combs, and Their Advantages.

HARRY LATHROP.



SOME one has asked what is the best method of securing shallow extracting combs to be used at the sides of comb honey supers. We have made a good many of these shallow combs

although we have never used them for the purpose stated. We do not know as

we can tell the best method of securing them, but we can give the methods we have employed, which were satisfactory to us.

We first used the shallow combs for hiving swarms on that were to be run for comb honey. Inch starters were put in and swarms hived on them, either in the case of natural swarming or for shaken swarms. One or two supers were given according to the size of the swarm. The comb honey super or supers were given at once; some times over a queen excluder. The frames would be filled, al-

most invariably, with nice worker comb, and fully occupied by the queen. At the close of the season these shallow brood chambers would contain scarcely any honey. Then we practiced placing them on top of the parent hive beside them, which, in the meantime, had been well filled with stores and would have a young queen.

Before the bees were put into winter quarters, we would take away the empty shallow combs and put them by to be used as extracting combs the coming season. In this way, while running a part of the yard for comb honey, we secured a good many combs.

When we want them built in a yard run entirely for extracted honey, we fill the frames with foundation and hang them in the extracting supers, alternating them with combs already built. Wires are not necessary, and the combs can be nicely attached to bottom bars by inserting strips of comb when extracting.

WHY WE LIKE THESE SHALLOW COMBS.

We use a good many of these shallow combs, but our super is seven inches deep over all. We want more of these combs, they are better for the production of extracted honey than the full depth L frame. That is, they are an aid to getting the best quality of honey, for this reason: They make it easier to avoid throwing out some unripe honey along with the ripe. Place a set of deep frames on a hive, and the bees will keep a strip of cells open along the bottom for the purpose of placing in them green nectar. If you extract these combs, some of this unripe honey will be mixed with the ripe,

which is a detriment more or less pronounced. If in the place of one deep super you had used two shallow ones, the upper one would be filled entirely with ripe honey and the unripe would all be in the lower one. There are times, of course, when the full depth combs would do just as well, but at these times two shallow supers are always as good as one deep one.

You will understand that we do not use the shallow combs exclusively, but we have thought many times that we would like to try using all shallow combs for extracting. We would also like to try running a yard in which brood chambers and supers were seven inches deep outside measure. Two or more of these would make a good brood chamber for building up in the spring, and one or two would do for wintering, according to the size of the colony. An ideal condition for wintering is secured by having one shallow super with very little honey in it, and one with solid combs of ripe stores; the latter to be placed on top. Our shallow frames are made in the ordinary hanging style, and probably they give as good satisfaction as any. We are an advocate of having an abundance of combs, and tiering up. We don't see how the best honey can be produced in a yard provided with only one set of extracting combs for each working hive. Some of us who use plenty of combs, and extract only ripe, sealed honey, are building up a reputation for our product, which the other fellows are helping to tear down by selling honey that has a mixture of green nectar in it.

BRIDGEPORT, Wis., Jan. 1, 1911.



Some Successful Experience with the Doolittle Plan of Comb Honey Production.

WM. KERNAN

DURING the spring of 1906 the honey flow from fruit bloom was very good in this vicinity. I had at that time a good chance to try the

Doolittle plan of placing a hive body containing empty combs on any colony we wish to run for comb honey and when the honey flow is fairly started, shaking

the bees in this upper hive body and moving the brood chamber to another stand.

At that time I placed hives of empty combs on quite a few of the best colonies and they filled these upper combs solid full of honey before the raspberry flow started.

At the commencement of the raspberry flow I shook the bees in the brood chamber upon the combs of honey on the old stand.

I then placed some of the brood chambers on the lightest hives in the yard, and some of them I tiered up two or three high on a new stand. I afterwards used the bees that these tiered up colonies contained to strengthen the shook swarms as they began to get a little weak for the best work in sections. In uniting the bees I placed a super containing partly filled sections on these large colonies, and in a short time the super would be full of bees.

I then carried the super, bees and all, and set them on any hive I wished to strengthen. Some of the tiered up colonies I reduced to mere neuclei in this way.

I don't know who first found out that bees can be united with any colony, providing the super containing the bees also contains some honey. I first found it out in reading Danzebaker's Circular on the production of comb honey. It often comes very handy in strengthening a colony when they seem to work too slow for best results.

While there are a great many ways of managing bees in the production of comb honey, the above way is not just the worst way of handling them. I think that for best results, the colonies should be quite populous, and a good honey flow on, before they are shook on the combs of honey.

DUSHORE, Penn, May 4, 1910.



Can Acquired Characteristics be Transmitted Through Breeding?

A. L. DU PRAY.

LIKE a great many other bee-keepers, I try to breed from my best stock; but colonies that are by far the best this year, I find very inferior next year. I have often had colonies that, early in the season, seemed to promise great things. They were strong in bees, and had lots of brood, yet the season would pass along and they would give little or no surplus. I remember having such colonies, when, for some reason, I neglected to change their queens, and the next season they would be among the best colonies I would have.

Now, I can understand how, if I wanted fast horses, and had a mare that came from stock that had been bred for speed for many generations I might get something that would be superior to what I already had. I would train my mare

with great care and skill, and when I had her at her best I would breed her to the best stud, one that had been carefully trained, and then I might get something even superior to either sire or dam. But these horses are domesticated, and by using skill and kindness we may develop all their inherited powers; and then, by breeding them, get the benefit of their inherited, as well as their acquired powers; in other words, they can, by careful training, acquire speed and then transmit both their inherited and their acquired powers.

Now I go to my bees; I find my best colonies are rustlers, and, of course, I will breed from them. They go out, and, perhaps, acquire; but then the thought comes to me, *how* are they going to transmit? Some one says, you will breed from the queen of that best colony. Then I

am confronted with the fact that while she can or might *transmit*, she can not *acquire*. Those worker bees can go out, and by straining and reaching, they may even lengthen their tongues, but how can they transmit that long tongue reach? Now, my horse is domesticated, and subject to my will, so that by great care and kindness I can use my greater will in inducing him to develop his inherited powers to their very utmost; but when I go into my apiary, everything is different. I find the bees are not domesticated, and are not subject to my will. In fact, I must work in accordance with *their* will. I can only use their natural instincts in trying to improve them and then I meet the difficulty above mentioned.

But some one says, they transmit their acquired powers, by the peculiar kind of food they feed the young. But that is what I don't *know*, and would *like* to know. It is a known fact that the queen can not go out and acquire skill in long reach. The drone might transmit but he can't acquire. He has no tools to work with, yet we expect him to transmit powers that he is not able to acquire.

Some have claimed that they have done something towards breeding out the swarming instinct. I'm running for extracted honey, using a 10-frame hive, and tiering up at the proper time. I have had less than five per cent. of my bees swarm, yet I know that those same bees, in small, poorly ventilated hives, would have done differently. So I take no credit for breeding out the natural propensity of the bees.

After all I have read and studied, and in the light of what experience I have had, I am almost forced to the conclusion that the honey bee is just the same as when Samson took surplus from the carcass of the lion. Yet, as I have said before, I do not *know*, but I would *like* to know.

CARPINDERA, Calif., Jan. 26, 1911.

[I did not feel competent to answer the questions asked by Mr. DuPray, so I sent his letter to Prof. E. F. Phillips, of the Apianian Department at Washington, D. C., who replies as follows.—EDITOR.]

The interesting letter of Mr. DuPray which calls forth this reply is very suggestive, but his conception of breeding is probably not the correct one. Before taking up a discussion of the main points in his letter, it may be well to discuss a minor but important point which occurs in the letter. He complains that colonies which show up best in the early part of the year do not always come up to expectations later in the season, but may do well the next year. I do not know why this occurs in California, but in the East it frequently happens that colonies very strong in the spring fill up their combs so full of honey that the queen is cramped for room. As a result this good breeding queen is unable to make a proper showing for herself when this surplus is taken off. The logical remedy for this condition is to give some surplus room early, where it is needed. This may not be the explanation for the condition that Mr. DuPray describes, but it is a point that is probably not fully realized by many Eastern bee keepers.

Mr. Du Pray assumes that if he trains horses for speed that these animals will, therefore, transmit to their progeny their acquired ability for exceptional speed. This is probably not true. The ability to transmit to the offspring characters which are acquired during the life time of the parents is a much discussed question among investigators of these problems. Whether this has ever occurred it would be unwise to state, but it may be stated most positively that if it does occur, it is so seldom that most breeders never saw such a case. The usually accepted belief is that inherited characters are properties of the sex cells (eggs and spermatozoa), and that unless these characters are latent in the sex cells they are not manifested in the offspring. It is further held that the acquiring of a special character (e. g., speed) in one generation by the body of the animal does not influence the sex cells, and that therefore the acquired character is not inherited.

It is well known that horses are bred for speed and that marvelous results have

been accomplished. This may appear as not harmonizing with the statements just made. However, it is more in keeping with the facts to assume that in this breeding work, those animals are selected as breeders which have shown speed and in which it may therefore be assumed that there exist sex cells having the latent speed characters. This assumption is not always correct and consequently the breeding is not always successful. If two animals having such inheritable characters are crossed the result may be a still more speedy animal than either parent, since the character is accentuated by the combination. It is true that the animals used for breeding fast horses are usually trained for speed, but this is because the owners desire to utilize to the fullest extent the bodily (not sexual) characters of the individual, and to use the results to test the probability of their sex cells having the desired characters.

It is believed and assumed that the sex cells are quite independent of the body cells. Mr. DuPray calls attention to the fact that a character acquired by the workers does not influence the queen. In the same way characters acquired by the body of an animal do not influence the sex cells. In bee breeding it would be necessary to choose as breeding queens those whose worker progeny showed the desired traits, on the assumption that those traits are inheritable. In the same way in horse breeding, that animal is chosen as a breeder whose body shows the desired traits on the assumption that

these traits are latent in the sex cells and are therefore inheritable. Bee breeding is peculiar in that we must deal with the colony as a unit instead of with the individual. In this unit, the queen seems to represent the sex-cell container and the workers correspond to the body cells of the horse.

I am well aware that the views here expressed are not held by all practical breeders, but they are the consensus of opinion of the majority of scientific workers in this field. They are here given not as a personal opinion based on investigation, but to point out the attitude of those well informed in this field of labor.

Mr. DuPray further calls attention to the fact that when preventing swarming by manipulation he does not breed out the swarming impulse. This is quite true. Breeding of bees has proven to be a problem that but few have had the courage to try to solve. Consequently we must try to do by manipulation the things that we possibly should do by breeding. When we see what has been done in breeding five-banded Italians we are forced to the conclusion that it is possible to change the bee by breeding. If we could but devise a method for control of mating, progress would be more rapid. The five-banded bee did not exist in the days of Samson's exploits with the Leo bar-frame hive, and it is probable that before as many centuries pass again some further changes in the bee may be seen.

WASHINGTON, D. C., Feb. 9, 1911.



The Rearing and Mating of Queens Above Queen Excluding Honey Boards.

FRANK G. ODELL.

O have on hand two surplus queens, numerous cells in process of building, and a colony of bees pursuing all the activities of the brood-nest at the same time, is a convenience

not to be despised by the progressive bee-keeper. Your invitation in the January Review to discuss this topic seems to be addressed to me personally, as I have followed this plan very successfully.

Doolittle in "Scientific Queen Rearing" discusses that peculiarity of the bees which leads them to think themselves queenless when nursing brood over a queen-right colony with an excluder between the brood-nest and the super. He also details at some length the possibility of rearing queens by this method. The writer claims no originality for the use of a method which is generally known to queen breeders. Just what sort of physical, mental or psychological change comes over the bees to delude them into the notion that they are queenless under such conditions is one of the mysteries for future solution and not a topic for present discussion. When the underlying principle which governs this strange departure from normal bee-life is understood, we will know more than we do now—and, possibly, something which will be greatly to our advantage.

It has always been my belief that the phenomena of Nature, and especially those of the hive, all have reasons for their manifestation; their belief leads to another, viz., that speculative investigation into the unaccountable things done by the bees is not to be despised.

Probably most bee keepers know that if frames containing eggs or unsealed brood are placed in an upper story over a queen excluding zinc, that the bees will not only go up and care for the brood, but will in many cases build queen cells on the frames in the upper story. Such cells appear to differ in no way from those built otherwise, and in my experience have produced good queens where they have been given proper protection from cold. While this plan is not feasible for rearing large numbers of queens commercially, it is so simple that it may be practised by the small bee keeper for the production of a limited number of queens.

First prepare the super, using a hive body with thin division boards at each side, making two, one-frame compartments. Cover the bottom of the center portion with queen excluding zinc and the narrow side compartments with common

window screen wire so that no bees can pass from these small upper compartments into the brood-nest below. At the back end of each small compartment, at the side of the hive, bore a quarter-inch flight hole and cover it with a wooden button of thin stuff which swings freely on a small nail. I prefer to make these "entrance closers" with a piece of excluding metal inserted so that passage is allowed for only one bee when the closer is properly placed. This prevents robbing. When turned a trifle more it closes the entrance entirely and still permits some ventilation. These small entrance closing blocks are exceedingly handy for small nucleus boxes and a supply should be kept on hand.

The top of this queen-rearing super should be covered with eanmeled cloth cut in three pieces and tacked to the top of the partitions so that either section of the super may have the covering turned back and its contents examined without disturbing the others. This practically eliminates any necessity for the smoker or the veil, a great convenience in queen-rearing. More than two divisions can be made if desired, but we have found it best to maintain a cluster of five or six frames of brood in the center where possible.

PREPARING THE COLONY.

Inasmuch as a considerable quantity of brood is required for this operation it is best to prepare the colonies set apart for this purpose by making them two-story, or as nearly so as possible, and getting an abundance of brood. Brood may be taken from other colonies for this purpose and if it is desired to rear queens from the brood of any particular queen, these brood-frames may be used for that purpose, being careful, of course, to take no strange bees into the queen-rearing hive. This preliminary preparation is equally important for another purpose, viz., that of securing an abundance of young bees for cell feeding and incubation.

It should always be remembered that young bees are required in numbers for

the best nourishment of queen-cells, and that good queens cannot be reared in colonies which are not so provided. Too much stress cannot be given to this highly important matter; queens cannot develop a strong physique and become prolific mothers unless they are well fed during infancy. For this reason queen cells, however started, should be nourished during the larval period of feeding in strong colonies, and for the same reason, we prefer to have fix frames of brood with their compact and warm cluster of feeding bees in our queen-rearing super.

We prefer a telescope cover for the queen-rearing hive with plenty of wrappings in case of cool nights. We remember one spring when for two weeks we had to wrap our queen-rearing colonies in blankets during the month of May to save our cells from chill. "Swarthmore" laid great emphasis on this matter of keeping cell-building colonies warm, and while it requires some degree of fussing about, it pays in vigorous young queens.

STIMULATIVE FEEDING.

It will be well to have a Doolittle feeder in the queen-rearing super, and as soon as operations are started feed lightly with a mixture of honey and syrup made from granulated sugar. This will be very necessary if honey is not coming in and if kept within bounds will do no harm at any time. If the brood frames are not fairly well supplied with pollen, substitutes must be provided for it; use rye meal or corn meal or wheat shorts; if these are placed in a barrel the bees cannot get at them and the bees will soon find all they want. This matter of stimulative feeding and pollen substitutes is a good thing on general principles and is worth practicing in an apiary.

GETTING CELLS STARTED.

We are now ready for some queen cells. Place the prepared super on a strong colony with at least four or five frames of brood containing eggs and young larva in the center division. Keep the lower story full of frames. Have the

brood frames placed in the super clear of bees when they go in. This will insure that plenty of young bees will at once go aloft and begin their work of feeding. It will be best not to try to start cells until there are plenty of drones beginning to appear, which will be soon after fruit bloom. If all goes well you will be likely to find a few nice cells started in the upper story within a few days.

When these cells are sealed over, select two frames each containing a cell and place one in each side compartment with a plentiful cluster of bees. Keep the flight hole closed for two days and then open it to the one bee space. This will get the bees to recognize these side compartments as their new home and they will use the flight hole without trouble. If more than one cell is on a frame the surplus may be removed and grafted on other frames of brood and used for starting nuclei with queenless bees. If you wish to continue the queen-rearing operation, after the cells have been sealed a week remove the super-frames to the lower part of the hive and put some fresh frames of brood above to start a new lot of cells.

In due time the queens will hatch in the side compartments, fly out and be mated and begin their work of laying. They can then be removed and introduced elsewhere, or the entire nucleus can be removed and a new colony started. In case the queen only is removed the nucleus of bees should be at once placed below and the original operation continued so long as it is desired to rear queens.

ADVANTAGES OF THIS PLAN.

This system of rearing queens offers distinct advantages to the bee-keeper who wishes to rear only a few queens. He needs little technical knowledge of the fine art of queen-rearing and no considerable amount of paraphernalia. The warmth of the colony below insures that the cells will be well incubated and the abundance of bees ensures that they will be well fed; the two principal things re-

quired to produce good queens, aside from parentage and mating.

The advantage of usually having a surplus queen or two on hand, in a nucleus, is a considerable item, and if increase is desired the nuclei are ready. If increase is the chief consideration I should prefer to make the outside, or mating nuclei large enough to hold two frames each.

Another, and a marked advantage is, that it is not necessary to make a colony queenless in order to get cells started or incubated. The colony can be immediately restored to its normal condition by removing the super, and, apparently, the bees never realize how they have been hounded by their keeper.

The principal disadvantage lies in the loss of surplus honey, and it is impractical to try to get surplus while rearing queens. The spring crop of comb honey is usually lost so far as such colonies are concerned. However, if increase is desired, several colonies can be set apart for this purpose and the queens reared while the brood is being accumulated for the formation of nuclei.

On the whole, this plan is very simple and well worth the trying by any beekeeper who wishes to rear a few queens without any particular amount of new equipment.

LINCOLN, Neb., Jan. 10, 1911.



EDITORIAL

Happiness grows at our own firesides, and is not to be picked up in strangers' galleries.

The National Association of Bee Keepers will hold its next annual convention August 30th and 31st, in the Court House at Minneapolis, Minnesota.

Vigilance in watching opportunity, tact and daring in seizing opportunity, force and persistence in crowding opportunity to its utmost possible achievement,—these are the martial virtues which must command success.

The Annual meeting of the Pecos Valley Bee Keepers Association of New Mexico, will be held at Roswell, N. M., at 9 a. m. Wednesday, June 7, 1911. Business of importance will come before the association. All lovers of the honey bee are invited to meet with us. R. B. Sleese, Pres.; Henry C. Barron, Sec.

Peddling Honey in cities may be quite profitable for a man adapted to the business. I have a letter this morning from a young man who has been selling honey

the past winter in Indianapolis. He says that he has cleared as high as \$6.00 a day. One week his net profits were \$32.50. Let others go and do likewise.

Sickness of the editor has made this Review late. The stomach and digestive ailments, from which he suffered last fall and winter, had been overcome; but while still in a weakened condition, he went down town one cold windy day and contracted a severe attack of bronchitis, from the results of which he is still suffering. With the coming of warm weather we hope to see him on the road to recovery.

Massachusetts has a great number of green houses devoted to the growing of cucumbers. It is impossible to secure a crop without the use of bees to secure the fertilization of blossoms. State Inspector of Apiaries, Mr. Burton N. Gates, states in his annual report that as many as 2,000 colonies are used each year for this purpose. There is some difficulty in always securing colonies that are free from disease. A diseased colony soon breaks down, is lacking in numbers, and fails to do its work thoroughly at a critical

time—the loss sometimes running up into hundreds of dollars.

Developing a Special Market for Special Articles.

Most of my readers know how myself and others have developed a mail order trade for our extracted honey at two cents a pound above the market price; well, perhaps you have never thought of it, but it is possible to work up a similar market for various other commodities, such as apples, potatoes, eggs, etc. To illustrate: It is impossible to raise nice, mealy potatoes on the black, mucky soils of Illinois, Missouri and Mississippi and other States in that region, while the dry sandy soil of Northern Michigan produces potatoes that are unsurpassed in flavor and quality. People living in the "mucky" regions are willing to pay twice the local market price in order to secure dry, mealy potatoes from the new sandy soil of Northern Michigan. Each year my brother and I sell a few barrels of potatoes to parties in Illinois, they looking

upon it as a favor to be thus supplied

Now then, if I were a farmer in Northern Michigan, I should make a specialty of growing some choice variety of potatoes, the early Ohio, for instance, and I should advertise them in the newspapers circulating in the region where it is impossible to grow other than the flat, stale and "watery" potatoes. I should not charge an exorbitant price, but I should expect to get above the regular market price, and I ought to, considering the expense of advertising, packing and shipping. Gradually I would build up a trade that would take thousands of bushels each year. No matter how plentiful the crop, nor how low the price in the open market, I could always be certain of a market at a very fair price.

The man who raises choice crops of apples, could do exactly the same thing in making a market for his apples. The same with eggs, or butter, or almost any farm product. I believe that one man has built up almost a national reputation for sausages sold in this manner and shipping by express.

Selected Articles.

AND EDITORIAL COMMENTS.

SHIPPING BEES.

How They May be Sent by Express with Perfect Success.

A Mr. J. C. McCubbins, of California, sent \$10.00 to Mr. T. L. McMurray, of W. Va., for two colonies of "Superior all-over-yellow, Italian bees." Later he paid \$18.13 express charges. One colony was dead, and the other contained only a few live bees—simply a weak nucleus. The combs were not wired; were built from starters, only partly completed, and mostly broken down. The purchaser wrote

the seller, but, receiving no reply, wrote to Gleanings. When Mr. Root wrote to Mr. McMurray, the latter replied, among other things, that he "didn't claim his combs were wired, and strong enough to stand rough handling." He then goes on to say that "bees are shipped at owner's risk."

The Roots very properly say that unwired combs are not fit for shipment; that partly drawn combs ought not to be used. They call attention to the need of using old brood combs, that are tough from the many layers of cocoons.

It is true that express companies will not assume any risk in carrying bees, but

that need not necessarily decide that the owner, the purchaser, must bear any and all losses. On the contrary, I say that the *shipper* of bees ought in all cases to bear any loss in shipping. Under no circumstances would I have bees shipped to me unless the shipper would guarantee safe arrival in perfect condition. The purchaser has nothing whatever to do with preparing the bees for shipment; the seller prepares the bees for shipment, hence it is "up to him" to so prepare the bees that they will bear shipment with safety. It is no excuse to say this can't always be done, because it *can*. To illustrate: A colony might be smothered by setting something on top of it, thus shutting off ventilation. This can be prevented by nailing two strips of wood across the top, thus making it impossible to shut off ventilation.

Broken down combs can be entirely avoided by using old brood combs built on wired foundation.

In the successful shipping of bees there is no more important factor than the *age* of the bees. *Old* bees are worse than worthless, unless the distance is very short. On this subject, I think there never was written a better article than one contributed to the Review, about 20 years ago, by E. F. Nebel, of High Hill, Mo. It reads as follows:

In your leader of March you have given nearly all the principal points for shipping bees, by the pound, in nucleus form, and in full colonies. I might add a few suggestions, having put up for shipment many a nucleus, full colony, and hundreds of pounds of bees. In only one instance was there a partial failure, and this was owing to the great distance and the earliness of the season. This shipment consisted of 46 lbs. of bees sent to Manitoba, May 10th, 1888. 11 lbs. of this consignment died while *en route*. The cause being mainly that three lbs. had to be put in each package, and this necessitated the taking of the entire force from each colony, which at this date included many *old* bees.

With us the breeding season is only nicely under way by the first of April; so that by the 10th of May we have not very many young bees. Old bees do not amount to much for successful shipping

when long confined and often disturbed which is the case while in transit.

When preparing bees for shipment I make it a point to secure mostly all young bees that have not done much field work; this can be accomplished by removing the colony to a new location and placing a new hive, with several frames of brood from the former, on the old stand to receive the old working force that goes to the field during the day; then late in the afternoon proceed to confine the bees in their packages for the next day's shipment. This preparation is made for nuclei and bees by the pound. Full colonies ought also to be made up the previous day by giving water, seeing that their queen is in good condition, that they have plenty of food, spacing the frames to remain so permanently while *en route*. The next morning tack wire cloth above, then close the entrance and we have all the force that belongs to a full colony leaving no stragglers behind from colonies shipped.

When nuclei and bees by the pound are made up of young bees as above, even for several thousand miles travel, there is no complaint received that "half the bees arrived dead;" on the other hand there comes a notice that "bees arrived in good condition only a few, three or four dead."

Bees purchased by the pound when most of them are old field-workers are of very little use to the purchaser in building up a colony. Old bees sent out with nuclei are not so bad; in this case the brood accompanying will hatch in time to take the place of the veterans.

A great mistake many make is in buying bees too early in the season before the wintering force disappears. This applies mostly to bees purchased by the pound.

In preparing packages for shipment in very warm weather, plenty of ventilation is given by the aid of wire cloth at top and bottom, and a projection of one half inch is made by tacking on strips over the wire cloth across the ends, at top and bottom to prevent anything from being placed on the packages, close to the wire cloth, to exclude proper ventilation, or to have the packages set flat on the floor so air cannot pass underneath; then, too, plenty of space is given on sides and top to give a chance to spread the cluster should they be placed in too warm quarters.

In case of reaching a colder climate they will readily cluster compactly to meet their necessary demands for warmth.

When shipping colonies or nuclei it is but very little trouble to partly fill a comb

with water, which will insure them enough, should the express company fail to sprinkle them as requested per direction, which should accompany each shipment. In packages of bees by the pound a section of comb with some water in it is the proper thing, and cream candy made of sugar and honey for food.

Wired frames, or rather combs, are almost an absolute necessity to prevent combs from being seriously damaged. I was present one day at the loading of some nuclei into an express car, when to my surprise they were placed on their sides, the combs lying horizontal, imagine the condition in which these would have arrived if allowed to remain so for any length of time on a warm day, and combs not wired.

The selling of bees by the pound at present prices is not a very profitable business, especially when two or three pounds are ordered in one package.

To take three pounds from one colony *literally destroys* that colony for much further use, except as a small nucleus and a few extra combs of brood to be given to other colonies. Taking into consideration the difference of what three pounds of bees will accomplish in a fair season, and the selling price of the same at the present prices, the trade in this line bids fair to be abandoned.

I notice that Mr. Root has discontinued the sale of bees by the pound. I also notice that the talk of mailing bees in quantities has ceased.

When I first began shipping bees by express, in the spring, I took pains to send only very populous colonies. I thought in this way to please my customers; but some of the reports that came in were certainly heart rending; "Half the bees dead," etc. This article by Mr. Nebel put me on the right track—showed me the folly of attempting to ship a hive full of *old* bees.

The worst possible time in which to ship a colony of bees is soon after it has been taken from the cellar, and before any young bees have been hatched. I remember when my brother Elmer was living at Vassar, Michigan, he one spring received an order for five colonies of bees to be shipped to Indiana. The purchaser was in a hurry for them—wanted them *right off*. Elmer wrote and explained to him that they were only just out of the

cellar, that the bees were old, and would mostly die *en route*. He advised the man to wait until the old bees had died off and been replaced by one or two batches of young bees. No, the purchaser would not wait. He had paid his money and wanted the bees. *He* would take all chances on their standing the journey all right. Send them on, or send back the money, was the way he wrote. The bees were sent, and a sad wail soon came back of half or two-thirds of the bees being dead; and there was a demand that the order be *refilled* (?) After a lot of correspondence, I believe Elmer did send him one more colony.

Have strong, old combs thoroughly fastened; give plenty of ventilation that can't be obstructed; give room to cluster *off the combs*; use only young bees; prepare colonies in this way, and nothing short of a smash up will prevent their safe arrival.

RIPENING HONEY.

On the Hives is the Only Place Where this can be done Perfectly.

The days for extracting honey will soon be here, especially in the southern part of the country. If you have not supers and combs enough to allow the honey to ripen on the hives, I beg of you to get them. Of all things, don't extract "green" honey. To be sure, it can be evaporated outside the hive, but evaporation and ripening are two distinct processes. As well pick green fruit and lay it away to ripen, as to extract green honey and expect it to have the rich, smooth, delicious taste of honey that has really been *ripened* naturally on the hives. I thought I had tasted ripe honey, but let me tell you something. Last summer and fall I was sick and my supers of clover honey were left on the hives until the cool days of fall. The honey was so ripe and thick that it had to be warmed up before it could be extracted. If poured from one dish to another it would pile up in a heap, and it would be quite a while before it would flatten out

level. Then the flavor! Any one who ever tasted that smooth, rich flavor could never be made to believe that "green" honey "evaporated" could be made to taste like that.

No man who has ever had experience in these matters would ever think of extracting "green" honey, and I know of no man who has had more experience in handling both "green" and "ripe" honey than has Mr. W. P. Southworth, manager of the Western Honey Producers' Association, and he covers this whole matter in an exhaustive, masterly way in a paper that was read last fall at the Albany meeting of the National. So good and sensible is the advice there given, that I feel it is worth while to copy the whole essay. Here is what he wrote:

Ripening honey on the hive, or the best method of producing honey that will "taste like more" to the consumer is a subject to which I have given a good deal of time and thought, and I wish that I could be present in person to defend the stand that I take.

I contend that it is not enough that honey be entirely sealed in the comb to be ripe and ready for market, but I hold that honey should age in the hive. I can not say how long a time should be allowed for this aging, as much depends on locality, the kind of bloom, and the atmospheric conditions.

My opinion is that this applies to both comb and extracted honey, but it is not so important to age comb honey, because it must be sealed in order to be marketable, and its attractive appearance has much to do with its ready sale. Therefore, we must consider this point and not allow it to become dark and travel-stained. No doubt most of us have seen the nectar in the open cells of our immaculate sections become bubbly and sour, and the faces of the sections become watery and greasy appearing, even when kept in a warm, dry place. This shows that the preserving properties are not complete.

In the production of extracted honey the perfect ripening is more essential, as the extracting process causes the honey to take in the ferment germs that attack the particles that are not thoroughly inverted or changed from nectar to honey.

In my position as manager of the Western Honey Producers' Association, 200,-000 pounds of extracted honey come

under my observation annually. The first two years of our existence as packers and distributors nearly all the honey came in small lots, and we noticed that there was quite a difference in the quality and density of the honey. This led to close examinations and tests, and the cause was soon located. Some of the honey had been extracted too "green." One such lot that was received in the fall of 1908 showed signs of outgrowing the cans soon after it was placed in the warehouse. Some of the cans were hissing quite loudly when it was discovered. This honey was at once treated by our clarifying process to see if the fermentation could be stopped. We succeeded in putting it in a condition so that it would keep indefinitely, but the flavor was injured so that it could not be used as table honey.

Last season we were offered some car-load lots that were slightly fermented, at half the price good honey was bringing, but we could not use it. A large grocery house bought it, and by cooking it in a steam kettle made an ingredient that they sell for pure honey. It will pass the pure food inspection, but it will not pass the lips of the consumer the second time. It is such honey as this, put up by ignorant persons (in the case mentioned above I think it is largely ignorance and a desire to get a large package for little money), that is ruining the honey market.

Give the consumer that rich, thick, delicious honey, that is extracted later in the season, and it will tax the bloom of our fertile fields to supply the demand.

Our honey business has expanded in the past four years more than we anticipated, and this has been brought about by our putting out the best honey. We have secured this best honey by getting next to the producers, and showing them where they are making their mistake. As a result, they were anxious to please the consumer, and today our warehouse is full of extracted honey, every can of which will test perfectly in density, formic acid and flavor.

The question will be asked, "how are we to let all of our honey ripen or age on the hive?"

My answer to this will depend much on the locality and kind of bloom. If the flow is principally light honey, then tier up and leave it until fall. If there is a light honey-flow followed by a dark autumn flow from buckwheat and other blossoms, that impart a strong flavor, I would say, leave the light honey until the dark honey begins to come in, and if a little of the dark is mixed in it, it is not so

serious a fault as to extract green honey or nectar.

I have read with interest the articles written by G. C. Greiner, E. W. Alexander, and others, on extracting often during the season, and their methods of artificial ripening. At the same time I have considered what constitutes honey, and would refer my hearers to the bulletin published by the Agricultural Department at Washington, D. C., entitled, "The Chemical Analysis and Composition of Honey." In this we find the following:

"In the modification of the nectar by the bees several changes in the composition are produced. Among the most important of these is evaporation of the nectar to a water content of about 20 per cent. This is effected in the hive by the bees exposing the nectar in thin layers to the action of a current of air produced by the fanning of the wings. This evaporation is further hastened, according to some, by a process of regurgitation, the nectar being continually thrown out from the honey-sac on the partly doubled tongue, and then drawn in again until, by the movement of the heat and air of the hive, the nectar is sufficiently reduced to be deposited in the cells of the comb.

"Another change of considerable importance which takes place while the honey is in the honey-sac of the bee, and also probably during evaporation and storage in the comb, is the inversion of a considerable part of the sucrose in the nectar through the action of the inverting enzyme secreted by the bees.

"Another modification produced in the nectar by the bees is the introduction of a minute quantity of formic acid. This acid is wanting in the pollen and nectar of the flowers, and is supposed to be introduced into the honey by the bees just before the capping of the cells. The formic acid thus introduced by the bees is supposed to act as a preservative, and prevent the honey from fermenting."

I am a great admirer of E. W. Alexander, and have his writings that I have studied carefully.

As far as I have tried his methods I find them well suited to the conditions in this locality, with one exception, and that is his method of extracting the nectar from the combs before it is sealed, or even well evaporated.

In Mr. Alexander's locality, and with his equipment and methods, this process may work out; but in this locality, and with the equipment that the average or even extensive bee keeper has, I believe the plan is worse than a failure—it is a damage to the honey market. I am of

the opinion that no producer of extracted honey should try it unless he wants to enter quite extensively into the manufacture of honey-vinegar; and I doubt if the nectar would make as good vinegar as ripe honey would.

Some bee keepers favor the frequent extracting of the green honey on account of the apparent economy, believing that it will save them something in the way of investment for fixtures, such as extra supers, frames, foundation, etc. But from the economical standpoint alone, to say nothing of the quality of the honey, I find that it is easy to prove that having the extra fixtures and allowing the honey to stay on the hive until the end of the season, and then making a business of extracting it at one time, rather than to be dabbling in it at intervals during the season, is the cheaper method, for much more time is sure to be wasted at each small extracting than would be wasted if the work was left to be done all at once.

Some argue that frequent extracting of honey from the combs stimulates the bees to greater effort to gather more honey to replenish their scanty store. On this question Mr. Dadant thinks that the more stores the bees accumulate, the more they will continue to gather, provided they have the combs to store it in; that is, they are not unlike human beings in that they work the hardest when they are prosperous; but if their hard earnings are taken away continually they become discouraged, and are more likely to give up trying to get ahead.

The all-important question with the consumer is the flavor of the honey that he is eating; and if we want him to eat more honey, we must give him the thick, delicious honey with the bouquet of the flowers in it; and we can not get this from nectar, nor can man ripen the nectar so that it will be equal to the honey that the bees have finished. There is a fair demand for good honey, and I predict that the consumption of honey will not increase until a good article is put on the market universally.

Four years ago I extracted a lot of choice clover honey which I supposed was ripe enough, and I wanted to get it out of the hives before it should become mixed with the dark fall honey. This honey was put into cans and pails very soon after it was extracted, and sold. Later in the fall I was trying to sell some honey to a man to whom I had sold some of this choice early honey, and he objected very strongly, saying that the other honey that I had recommended to him so highly, had fermented, so that he had to throw it out.

This was where I got my first intimation of what it means to produce good honey. Some of that nice clover honey that I had in the house I noticed was changing rapidly, and it soon spoiled. I know now that I can produce good extracted honey, and I know that all the bee-keeping fraternity can do it. The majority of the bee-keepers will be glad to do it when they have their attention called to the importance of this part of the work.

It is not more bee-keepers that the country needs, but more careful, painstaking honey producers that are willing to sacrifice quantity for quality, and give to the consumers Nature's richest sweet, properly prepared, and then we will see the condition that I referred to before, when the bloom of our plants will be taxed to supply the demand.

Good Queens

My 14 years of experience enable me to know what good queens are, also how to rear them. I can furnish three- or five-banded golden Italians, reared in strong colonies and mated in three-frame nuclei. I have five different strains, so there will be a direct cross in the matings. Orders can be filled now by return mail at the following prices: Untested, \$1.00; six, \$4.50; twelve, \$8.00. Tested, \$1.50; six, \$7.50; twelve, \$13.00. Breeders, \$3.00. Three-frame nucleus \$5.00. Add price of queen wanted.

A. B. Marchant, Sumatra, Fla.

D. Cooley can fill your orders with the
A. I. Root Company's

STANDARD BEE SUPPLIES

On short notice. Catalog free.

D. Cooley, Kendall, Mich.

WHOLESALE

BEE SUPPLIES

RETAIL

Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to Gleanings in Bee Culture—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON,

Opp. Lake Shore Depot.

Lansing, Mich.

IT PAYS TO USE

DABANT'S FOUNDATION

**A. G. WOODMAN OF GRAND RAPIDS,
AGENT FOR MICHIGAN.**

**DABANT & SONS
HAMILTON, ILLINOIS.**



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER HONEY JARS

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTERS. POWDER, Indianapolis, Ind.
859 Massachusetts Avenue.

Good Queens

are a good investment. My Italian queens are reared right; in strong colonies, from the best stock. W. Z. H. has been buying them in years past and will get more this year. No bee disease. Satisfaction guaranteed. June, 90c, 6 for \$4.75, later, 70c, 6 for \$3.75. Less by the hundred, 4-11-tf S. F. TREGO, Swedona, Ill.

Good Bee Supplies At Low Prices

I have 65,000 section holders that I will sell at \$1.00 per 100, as long as they last. They are nicely made, dovetailed and of the right style for the $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{2}$ sections, also some for the $4 \times 5 \times 1\frac{1}{2}$ sections. I also have a large stock of plain section holders for $4\frac{1}{4} \times 4\frac{1}{2}$, and $4 \times 5 \times 1\frac{1}{2}$ sections.

I have 45,000 Langstroth brood frames at \$1.50 per 100 as long as they last. Some are with V-shaped top-bars, and some with two grooves and wedge. Also some all-wood, or loose hanging frames.

I make the finest polished sections on earth, and want to prove it to you. Car load lots a specialty. Send for catalog. 4-11-4t

Chas. Mondeng, Minneapolis, Minn.
160 Newton Ave. N.

The Finest Honey.

We have the finest honey in Texas. It is from the Catsclaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas. Address

W. B. DAVIS, Del Rio, Texas.

6-10-tf

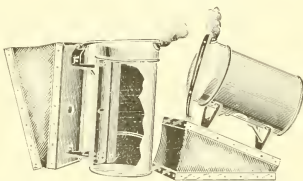
—If you are going to—

Buy a Buzz Saw

write to the editor of the Review. He has a new Barnes saw to sell, and would be glad to make you happy by telling you the price at which he would sell it.

GOLD MEDALS

St. Louis Exposition 1904.
Jamestown Centennial 1907.



Danzenbaker Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The perpendicular **Fire Draft Grate**, forcing air **Both Ways**, makes and cools the smoke, forming a **Double Fire-Wall for Securely** riveting the **Double-Braced** brackets to the cup, that is **Firmly Bolted** to the valveless bellows by **Locked Nuts**.

The **One-Piece cap Can Not Clog**. It is the **Coollest; Cleanest; Strongest, Best, and Largest Net Capacity** of all Smokers selling at one dollar \$1.00. We **Guarantee Satisfaction** or **return the price**; only three complaints in **six years**.

Danz. $3\frac{1}{2} \times 7\frac{1}{2}$ inch Prize Smoker, \$1.00; by mail \$1.25. With Bee Keepers' Review, \$1.00 year, and Prize Smoker, \$1.75. Danz $3\frac{1}{2} \times 6$ inch Victor Smoker, 80c; by mail, \$1.00. With Bee Keepers' Review one year, \$1.50.

We send **propolis shields** with Danzenbaker Hives and Supers, and sell anything in the bee line at **factory prices**; also select 3-banded Italian Queens and Bees.

Please send the address of yourself and B-friends for **free catalogs and prices** on Bee Supplies, Bees, Queens, Hives, Supers, Sections and Smokers.

F. DANZENBAKER, Norfolk, Va.
68-70 Woodside Lane

Italian Queens

The most gentle, and beautiful, and the best that money can buy. Untested, 75 cts.; tested, \$1.00. Write for prices on nuclei and bees by the pound.

C. B. BANKSTON, Buffalo, Texas

4-11-tf

Some Queens That Will

Double Your Honey Crop

If Given a Chance

Wonderful Results from Care in Breeding



THE one apicultural field left nearly untrodden is that of improvement of stock. None holds out greater rewards for the efforts put forth. This is proven by the wonderful yields secured by the few enterprising men who have ven-

latter. Then followed a judicious crossing and a systematic selection that has enabled Mr. Howe to practically double his honey crops.

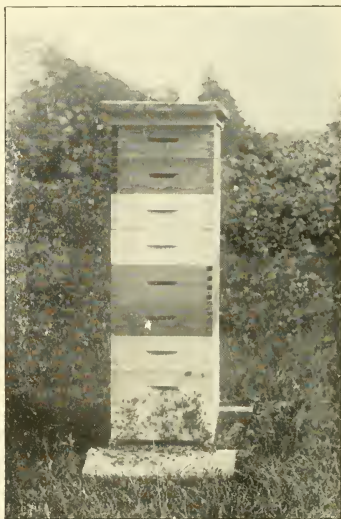
Following the publication of his article in the Review, life was made a burden to Mr. Howe by the deluge of letters that came to him from all over the country asking the prices on queens. He had none for sale. He could not afford to sell his breeding queens—in fact, for three or four years he has offered and would gladly pay \$100 for a queen whose progeny would prove superior to his present stock.

tured into this fertile realm. For instance, when attending conventions and visiting bee keepers in New York, in the winter of 1909, I repeatedly heard of the wonderful strain of Italians and the bountiful yields secured by Mr. Geo. B. Howe, of Black River, N. Y. After my return I corresponded with Mr. Howe and learned that for 14 years he had been working in the direction of improving his stock; and that, of late, it was not unusual for him to secure 200 pounds of comb honey per colony. He said that bee keepers who visited him could scarcely believe it possible that he secured such crops.

At my earnest solicitation, Mr. Howe consented to tell in the Review the story of his success. How he secured the best stock to begin with; how the work of weeding out was performed; his methods of breeding, etc. This article occupied five pages of the Review for July 1910.

Origin of this Stock

Of course, there is not room here to give details, but it seems that the foundation of this strain came from a red clover or "long-tongued" queen from the A. I. Root Co. and from stock procured from L. H. Robey—principally from the



Twenty-five Dollars for a Queen

Feeling sure that the dissemination of this stock would be of immense advantage to bee keepers, I have paid Mr. House \$25.00 for one of his choice breeding queens to be shipped in the spring, in a full colony; and, during the honey flow of June and July I shall use this queen as a breeder in rearing for sale a few choice queens, doing the work with *my own hands*. In my apiary here at Flint I have a dozen colonies headed by choice tested queens secured last year from L. H. Robey, and these colonies will be used as drone-mothers, no other drones being allowed to fly, and, as my apiary is isolated, queens are almost certain to be mated to the Robey stock. Cells will be built in full colonies, made unusually strong by shaking into them large quantities of bees from other colonies, thus securing great, big, luxuriant, corrugated cells from which hatch those large, plump, vigorous, fully developed queens. Considering the stock and the manner of rearing, such queens are well worth \$5.00; in fact, the introduction of such a queen into an apiary may mean hundreds of dollars, but I shall offer them at only \$2.50 each. Some may consider even that a high price. To such let me say that my customers will make

DOLLARS where I make CENTS; besides, just notice

The Guarantees

under which they are sold. I will guarantee safe arrival, safe introduction (if instructions are followed,) purity of mating; and *entire satisfaction*, to the extent that, if so desired, the queen may be returned any time inside of two years and the money will be refunded, together with a dollar extra to pay for the trouble. It will be seen that the producer *runs no risk whatever*, and if not *entirely satisfied*, can have his money back, plus \$1.00, any time inside of two years.

A Special Offer

I said that the price of a queen would be \$2.50. There is only one condition under which a queen will be sold for less, and that is in connection with a subscription to the Review for 1911. The Review is a \$1.00 a year, the queen is \$2.50, but I will send both for an even \$3.00. If you have already paid \$1.00 for the Review for 1911, you will be entitled to a queen for only \$2.00. Orders will be filled *strictly in rotation*; so, if you want a queen as early as possible, don't wait—order today—*right now*.

W. Z. Hutchinson, Flint, Mich.

PATENT BINGHAM SMOKERS. 24
YEARS THE BEST. CATALOG FREE.
T. F. BINGHAM, FARWELL. MICH.

ITALIAN BEES and Queens and supplies. Root's standard goods. Ask for circular. Aliso Apiary, El Toro, Calif. 2-10-11t

Mexico as a Bee Country

B. A. Hadsell of Buckeye, Arizona, one of the largest bee keepers in the world has made three trips to Mexico investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated pamphlet describing the tropics of Mexico as the Bee Man's Paradise, which he will mail free by addressing him. 5-11-4t

B. A. Hadsell, Lititz, Ariz.

Wanted Pure Beeswax. Write stating price and quantity for sale. THE HAM & NOTT CO. Limited, Mfrs. Bee Keepers' Supplies, Biantford, Ontario, Canada.

ITALIAN QUEENS, Nuclei, Bees by Pound. Ten - page descriptive list free. Send for it you have my address, and I have not yours—before placing your order. Leaflets, "How to Introduce Queens," 15c; also "Increase," 15c; both for 25c. 4-11-1f

E. E. MOTT, Glenwood, Mich.

Wanted

Early orders for the Old Reliable Bingham Bee Smokers. Address
T. F. Bingham, Alma, Mich.

Advanced Bee Culture

A New Edition

The new edition of **ADVANCED BEE CULTURE** is now ready for delivery.

So many changes have been made that it is almost a *new* book. Quite a number of chapters have been dropped entire while entire new chapters have been added. Many have been largely rewritten. The most new matter has been added on the management of outapiaries, and the production and sale of large quantities of extracted honey at an advanced price.

Some of the pictures have been dropped, and many new ones added.

The number of pages has been kept about the same, but the publishing facilities of the A. I. Root Co. have allowed the price to be reduced to an even \$1.00, postpaid. Review one year and the book for only \$1.90.

W. Z. Hutchinson, Flint, Mich.

COMB FOUNDATION

Bee Keepers' Supplies

The Dittmer Process Comb Foundation
Pleases.

It is made on new, improved machines
and the bees take to it more readily than
any other comb foundation on the market.

Our Wax Circular and Bee Supply Price
List free upon application.

Write us your wants—it is no trouble to
us to answer letters.

Gus Dittmer Co.,

Augusta, Wis.

New Catalog Now Ready

Of Dovetailed Hives, Marshfield Sections, Dittmer's Foundation and all kinds of bee keeper's supplies at Reduced Prices, (car loads in stock). Also all kinds of Berry Baskets, Hallock Cups, Hallock Boxes and Crates to match.

Honey and Beeswax Wanted, Wax 30c.

W. D. SOPER, Jackson, Mich.

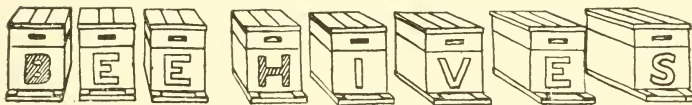
323-325 S. Park Ave.

1-11-8t

A Post-Card Projector

A year ago Santa Claus brought my eight-year grandson, Bruce Hanneman, what is called a post-card projector. By means of a powerful light, any bright picture the size of a postal may be greatly enlarged and thrown upon a screen. If you have a Youth's Companion premium list, you will find this projector illustrated and described, only the one that we have uses a 32-candle power electric light, instead of gas. This is a very interesting toy for children, but my grandson has played with his so much that he has tired of it, and he came to me and said: "Grandpa, couldn't we advertise this in the Review, and sell it, and then take the money and buy something else?" So I'm trying. It cost \$3.50 new, and is just as good now as the day it came, but we will sell it for only \$2.50. Shipping weight 4 lbs. Must go by express, and charges paid by receiver.

W. L. Hutchinson, Flint, Mich.



are our specialty. We furnish such extensive bee keepers as E. D. Townsend and others. Consider getting your bees into Protection Hives this fall. Give us list of goods wanted.

A. G. WOODMAN COMPANY

GRAND RAPIDS, MICHIGAN

Sections at \$3.50 per 1000.

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping-Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

Renewal Offer

We have been using the Dan-ze smokers in Our Northern Michigan Apiaries, and like them very well. My brother, Elmer, prefers them to any other. Their good points are fairly set forth in the advertisement in this issue. The price is \$1.25 postpaid, but I will send the Review one year, and one of these smokers, for only \$1.75.

W. Z. Hutchinson, Flint, Mich.

For the Asking

My catalog of Poultry, Bees and Supplies, including special offers at bargain prices. Shall I hear from you? 4-11-11

H. S. DUBY, St. Anne, Ills.

Camera For Sale

I wish to sell my camera, and I'll tell you why. My health, the condition of my heart, will not allow me to lug any heavy loads in the future, and an 8 x 10 view-camera, with tripod, plate holders and plates makes quite a lug. After such a camera is once on the spot, it is decidedly superior for the making of superb photos, but I must be content with something a little smaller and lighter—possibly to use films instead of glass plates. To one who is to do most of his work at or near home, or who is strong and rugged and able to carry the camera if necessary, nothing is better than a camera like mine. I have had it several years, but have always used it with care, and it would be almost impossible to distinguish it from an instrument right from the shop. It is the Empire State, made by the Rochester Optical Co., of Rochester, N. Y. It has all of the modern improvements, such as rising and falling front, horizontal and vertical swing, etc. My entire outfit, and the cost is as follows

Camera.....	\$28.00
Rapid Rectilinear Lens.....	20.00
Folding Tripod.....	3.50
Low Shutter.....	4.50
6 Double Plate Holders at \$1.85.....	11.10
14 Inside Kits for using smaller plates at 40 cents.....	5.60
Ray Filter.....	3.00
Canvass Carrying Case, Felt Lined.....	3.50

Total \$79.20

I would sell the entire outfit for \$50.00, and the man who buys it would get no better if he bought direct from the manufacturer, and paid about \$25.00 more for it. Any questions cheerfully answered.

W. Z. HUTCHINSON, Flint, Mich.

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of 5 to 7 cents per gallon. Process by mail \$1.00

C. W. Dayton. Chatsworth, Calif.

A NEW CREATION WEBSTER'S NEW INTERNATIONAL DICTIONARY

THE MERRIAM WEBSTER

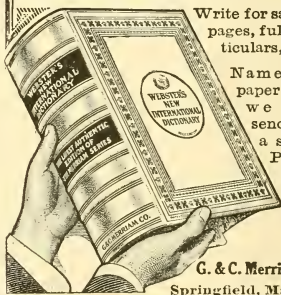
The *Only New* unabridged dictionary in many years.

Contains the *pith* and *essence* of an authoritative library. Covers every field of knowledge. An Encyclopedia in a single book.

The *Only* dictionary with the *New Divided Page*.

400,000 Words. 2700 Pages. 6000 Illustrations. Cost nearly half a million dollars.

Post yourself on this most remarkable single volume.



Write for sample pages, full particulars, etc.

Name this paper and we will send free a set of Pocket Maps

G. & C. Merriam Co.
Springfield, Mass.

Electric Motor For Sale

We sold our printing office last summer to a firm already equipped with motors, hence they had no use for our motor, and it is still on hand. Here is a description: It was manufactured by The General Electric Co., it is type C. A., continuous current, of 500 volts, speed 2,000 revolutions per minute: ¼ horse power. There is also a starting box and speed controller, which allows the motor to be run at different speeds. The entire outfit cost us \$55.00, and is exactly as good today as when we bought it, yet we would be glad to sell it for \$25.00.

W. Z. Hutchinson, Flint, Mich.



IF you need a nice yellow Italian Queen at once, send to **J. L. Fajen, Alma, Mo.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

Honey Quotations.

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15c to 16c; fancy white extracted, 10c to 11c; beeswax, 30c.

BLAKE-LEE CO
Feb: 16 4 Chatham Row

NEW YORK CITY—We quote white clover and basswood at from 9½c to 10c per pound; light amber, 8½c to 9c per pound; mixed and buckwheat 6½c to 7c per pound; West Indian and Southern, average quality, 70c to 75c per gallon, Southern light color, 80c to 85c per gallon. Beeswax, quiet at from 29c to 30c per pound.

HILDRETH & SEGELKEN,
Feb. 16 82 Murray St.

CHICAGO—Extracted honey is scarce and anything of basswood or clover grades is in demand. We quote as follows: Fancy white, 17c to 18c; No. 1 white 15c to 16c; fancy amber, 12c to 13c; No. 1 amber, 10c; fancy dark 9c; No. 1 dark 8c; white extracted, 9c to 10c; amber, 8c to 9c; dark, 7c; beeswax, ir clean, 32c.

R. A. BURNETT & CO.,
Feb. 15 199 S Water St.

CINCINNATI—Demand for comb honey has slackened up to such an extent that those who have any on hand are sacrificing it in order to get rid of it. On the other hand, it does not seem as if the trade is craving for honey in the comb at this time of the year. Extracted honey is not moving as freely as we expected, nevertheless, for strictly fancy we are getting from 9c to 10c in 60-pound cans, two cans to the crate, according to the quality and quantity bought. Amber honey in barrels from 6½c to 8c per pound. We are paying 30c cash or 32c in trade for nice, bright yellow beeswax, free from dirt.

THE FRED W. MUTH CO.
Feb 6

KANSAS CITY The demand for comb and white extracted is good. The demand for amber extracted is very light. Beeswax good demand. No. 1 white, per case of 24 sections \$4.50; No. 1, amber \$3.25; No. 1 dark, \$2.75 to \$3.00; white extracted 8½c to 9c; amber, 7c to 7½c; beeswax, 28c to 30c.

G. C. CLEMONS PRO. CO.
Feb. 16

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JUNE AND JULY, 1911.



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\$1.00 a Year.

Bee Keepers Review

Published Monthly

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- To promote and protect the interests of
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- To prevent the adulteration of honey.

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5-11-11

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Care BEE KEEPERS' REVIEW.

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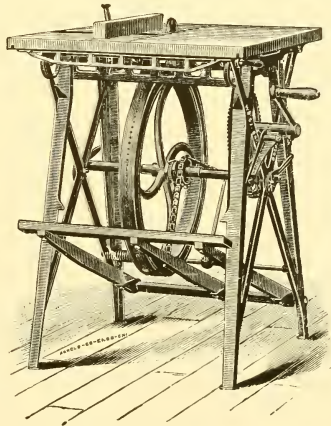
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W. S. McKNIGHT,
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5-11-21

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W. C. MORRIS

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4-11-12t

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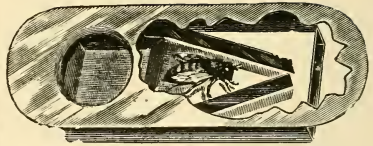
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My catalog of Poultry, Bees and Supplies, including special offers at bargain prices. Shall I hear from you?

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No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

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J. E. HAND,
Birmingham, Ohio, U. S. A.



*As ever yours,
W. Z. Hutchinson.*

Born, Feb. 17, 1851.

Died, May 30, 1911.

The Bee Keepers' Review.

A MONTHLY JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS

\$1.00 A Year

E. B. TYRRELL, EDITOR AND PUBLISHER

OFFICE OF PUBLICATION - - - 230 WOODLAND AVENUE

VOL. XXIV.

DETROIT, MICHIGAN, JULY 1, 1911.

Nos. 6 -- 7.

W. Z. HUTCHINSON

by

E. B. TYRRELL.

ALWAYS looking on the bright side of life, always starting his daily task with a boy's enthusiasm, never discouraged no matter what happened, ever ready with a word of encouragement, such was the character of the man whose picture is this REVIEW's frontispiece.

What a lesson there is for us in the life of Mr. Hutchinson. How prone we are to bemoan our fate if things don't go just as we wish them to. How often we feel that our row is just a little harder to hoe than is the other fellow's. How many splendid achievements remain unaccomplished simply because we lack the courage to begin them, or possibly we begin them and then fall by the wayside when we receive the first bump.

Not so, however, with our good friend, Mr. Hutchinson. Who ever heard him complain? And yet he seemed to have more than his share of misfortunes during his whole life.

Born in New York State in 1851, he came with his parents to Michigan when but four years old. The State was then mostly covered with magnificent forests. Here he grew to manhood, and, to use his words, "saw the forests recede and give place to cultivated fields, log-houses give place to more comfortable modern homes, ox-teams supplanted by horses, and, still later, the iron horse was given a warm welcome."

On June 13th, 1875, Mr. Hutchinson was united in marriage to Miss May Simpson, of Flushing, Mich. Their married life began in a house in Thetford, built, before marriage, by the groom's own hands. A business trip called him away before this house was completed, and while on his way home he was taken seriously ill of measles. He managed to get home, but was ill a long time. This postponed the wedding, and to add to the misfortune, what little he had laid by to begin this



A cosy nook in editor Hutchinson's home, where many of the bright things for the Review were planned.

new life was swept away by fire. Four children were the result of this union, three of whom, together with Mrs. Hutchinson, survive him.

Mr. Hutchinson began bee keeping in a small way the second year of his marriage. He began by producing comb honey and rearing queens for sale. From this small beginning he gradually built up an apiary until it reached into the hundreds of colonies.

In January, 1888, the first issue of the REVIEW appeared. This venture was not without its difficulties. Sickness came. First the little daughter; then the father. He lay in the big bed; by his side the little girl lay in her crib; while the wife and mother hung over them and nursed them back to health. But the REVIEW? It was cut down as an untimely frost cuts down a tender plant. Bravely its editor went

to work; and, finally, tiny shoots, in the shape of subscribers, began to appear. Expenses, however, must be curtailed, and it became evident that the REVIEW must be "home-made." There was a long talk with the printer, in which the facts were fairly and frankly stated. Very kindly he consented to give up the contract and to sell, upon easy terms, the type that had been bought expressly for the REVIEW. Then began the discouraging task of setting up the type and making up the forms at home, without previous experience. But the work had its attraction. The wife and children became imbued with the spirit of enterprise. They addressed the wrappers, folded and stitched the papers, and wrapped them up for mailing—and—the life of the REVIEW was saved.

His last illness was without doubt

due to grip, which attacked him three years ago. Two years ago came the second attack, and still the third one a year ago. The last attack caused the mastoid trouble, for which he underwent an operation at the hospital. He recovered from this operation very nicely, but there was still *something* wrong that dated back to the first attack of grip. He kept trying and trying to overcome that, but without success. Finally his doctor told him he had anæmia and that his food did not nourish him sufficiently. Later his heart became affected, and he went to Ann Arbor for about ten weeks. His heart trouble improved, but he was still in bad shape. Later he went to Ohio and treated with a specialist, but without success. Returning home, he underwent another operation for a chronic trouble that had attacked him, and would of itself take him away if not overcome. The operation was successful, but that anæmia was still there. He could not gain in flesh. Finally

he seemed better, and went down town on business, only to contract a severe case of bronchitis. This pulled him way down again and weakened him very much. Transfusion of blood was proposed and performed. At first he seemed stronger, but as soon as the good blood was used up he began growing weaker, his heart became bad again, and at the last he sank rapidly, becoming unconscious, in which condition he died.

Thus passed away from this earth one of its *best* of men. Always hopeful, his life was an inspiration to others. Right up to the last he was laying plans for the future, and expecting to get well. No matter what happened he was always looking on the best side, and may we, his students, not only learn the lessons of bee keeping as taught through his writings, but may we learn the greater lessons of faith, courage and optimism as taught by his life.

How A Bee-Keeper Can Rear His Own Queens Above Excluders While Producing Extracted Honey.

JOHN A. MCKINNON.

IN the January number of the Review you made a request for articles on raising queens above excluders. As I had good success last season in raising queens and getting them mated over strong colonies, in extracting supers, my experience might contain some of the information asked for. This plan can only be worked in a yard run for extracted honey.

I began the season with 24 colonies, and later bought four more, and everything was done to get them as strong as possible early in the season. When strong enough they were supplied with

full depth extracting supers containing full sheets of foundation, and in most cases the queens were occupying those supers almost as soon as the foundation was drawn out. When the clover flow had been on one week, I made preparations for raising my supply of young queens. My wife made the cell cups, a la Doolittle, and the first batch was started according to his plan. These were placed over a strong colony with the queen on foundation in the lower story, and the brood piled in two supers above the excluder. When about ready to hatch the cells were put in cell protectors and one placed in each of sev-

eral extracting supers, along with a few frames of brood taken from below; and the bees and young queen were given an entrance at the back of the hive, by raising its cover and inserting an end bar or piece of wood, so as to give a half-inch entrance under the quilt and cover.

As soon as these were mated and laying I used them with capped brood and a frame of honey for increase.

CETTING THE CELLS STARTED.

Later I struck on a much easier plan of getting cells started. After attaching the cells to the removable bar, and putting a drop of honey in each one, they were placed in the top story of a strong colony for a couple of hours, and the bees given time to polish them up. If left longer than two or three hours the bees will spoil the cells by drawing them out into comb and building about them. By having the bees polish the cells before transferring the larvae, I found I could get as many accepted without the use of royal jelly.

TRANSFERRING THE LARVAE.

During the honey flow the larvae fairly swim in the milky fluid, and by using a small toothpick-shaped piece of maple wood, smooth and bent spoon-shaped, I could pick up the larvae, pap and all, and found that the bees would accept and finish these as readily as when royal jelly was used, and without previously shaking them into a swarm box.

GRAFTING THE CELLS.

When grafting the cells I cut out a piece of comb containing the youngest larvae and shaved the cells down so as to more easily get at them. By close observation I found that the largest and most beautiful queens were raised from larvae that was just hatched from the eggs when transferred, and I imagine that their work looked better, too, when they began laying, although there

was a larger per cent of the larger queens lost in mating, but I would hardly say that their size had anything to do with that.

PRODUCES GOOD QUEENS.

A man who has the time and wants to raise his own queens can secure as good as he can buy, providing he has good stock to start with.

In an extracting yard the colonies can be re-queened in this way, without the delay of cage or candy methods, or the loss of one pound of honey. When the young queen has mated and started laying, the old queen in the lower story is removed and the bees and young queen from the super shaken at the entrance; or, if increase is wanted, the young queen is left at the old stand and the old queen and brood-nest removed to another part of the yard, where, if the old queen is not a good one, she can easily be found and removed, and a young queen, virgin, or ripe cell given. If this is done at the close of the basswood flow both colonies will be as strong in bees as if only the old queen had been left, and only young bees will go into winter quarters, as old bees seem to use themselves up pretty fast in raising and caring for brood at that time of the year. Some colonies of black bees that I treated so the first of August (Italianized), did not show a single black bee in October, and were very strong in yellow bees.

NO SWARMING.

I raised and had queens mated over almost every strong colony in the yard, and in no case was it the cause of a swarm issuing, either with the old queen or with the virgin on her mating flight. Queens can be raised by this method without the extra expense of baby nuclei, or anything else that one cannot prepare himself outside of the ordinary frames and extracting supers.

I also reared queens over strong colonies in extracting supers that contained no brood, and I could not see that it made a particle of difference in the quality of the queens or their acceptance of the cells. However, if young brood is placed in these supers, the bees will in some cases start queen cells of their own, which must be destroyed before having time to hatch; and when all the brood is sealed over and the surrounding comb filled with honey, these frames can be extracted and the brood given to help weaker colonies.

BALLED QUEENS NO GOOD.

Now just a word about balled queens. I had three cases of virgin queens be-

ing balled by entering the wrong hive, and although I introduced them safely to other or their own bees, they never got mated or started laying. One of them I left for over a month, and after queen cells had been repeatedly destroyed, I took a closer look and found her. After removing her I introduced another virgin, which mated and was laying in a few days. From these experiences I believe a queen balled by strange bees, bent on her destruction, even though for only a short time, is of no more use, and the apiarist should let them finish their job or do it for them, and save time and vexation by replacing her.

St. Eugene, Ontario, Can., Jan. 24th, 1911.

Breeding for Improvement. Some Simple Plans for the Honey Producer.

F. L. POLLOCK.

PROBABLY there is no subject of so much importance, nor one so generally neglected. The veteran McEvoy gives it as his opinion that nine-tenths of the queens in Ontario should be destroyed, and bee-keeping in Ontario is certainly as highly developed as it is anywhere in America. If all queens died in the winter and bee-keepers were all obliged to send to the breeders for new ones every spring, it is likely that it would be a great benefit to honey production.

A great many bee-keepers are deterred from systematically trying to breed from their best colonies by an exaggerated notion of the difficulty of the work. The Doolittle or Aliey plans, however, are very easily learned; and if these prove too complex, there never was a simpler or more effective system than the one described by the editor of this journal in "Advanced Bee-Culture." His plan is simply to take

a frame of hatching eggs from his best colony and to cut holes in it, an inch in diameter, beside the eggs. This frame is put into a strong queenless colony, and cells will be built round every hole, probably a dozen or so cells on the comb. When the cells are within a day or so of hatching they can be cut out and given to the colonies that need them. The average beginner (at queen rearing) will probably succeed better with this plan than with the sticks of cell cups.

Anyone who wishes to take still less trouble can requeen by dequeening his worst colonies, say half the yard, and cutting out cells after four days. Then give each of these a frame containing eggs from one of his superior colonies, and the thing is done.

TRAPPING THE DRONES.

In any of these methods, the drones should be trapped from all the unde-

sirable colonies. This can be simply done by placing a strip of zinc queen excluder over the entrance about the middle of the afternoon of a bright day and leaving it on till the next morning. The drones that are out of the hive will be unable to get back and will perish in the night. It may be necessary to repeat this treatment for two or three days to kill them all.

INTRODUCE NEW BLOOD.

In connection with this, it should not be omitted to introduce new blood by requeening at least one-tenth of the apiary each year with queens from the best breeder obtainable. No investment will pay better. A seventy-five cent queen may make a difference of five dollars' worth of honey.

This new blood can be used to breed from, but caution should be used in breeding from any stock before it has proved its superiority. A year or two ago I purchased a single queen from probably the best known breeder of Italians in the United States, and one who has been much praised by the editor of this journal. She was wintered in a very cold cellar in a five-frame nucleus, but the bees came out about as strong as they went in, and during the spring they built up into a strong ten-frame colony. They were boiling over at the opening of the honey-flow, which was a fairly good one. I never saw handsomer or gentler Italians, and the queen kept the hive full of brood, but they would not work. They did not store a drop of honey in the extracting super, and the brood-chamber actually

seemed to contain less honey at the end of the honey-flow than at the beginning.

Before this result became apparent, and hypnotized by the breeder's reputation, I reared about twenty queens from this mother. Afterwards I was sorry that I had been so premature, though some of her daughters showed themselves energetic workers on buckwheat that fall.

This is not intended as a slur on that particular breeder. Indeed, I intend ordering a dozen queens from him this spring. But it simply shows how individuals of the best strains may prove worthless in some qualities. It needs at least half a dozen to make a test.

MATING STATIONS.

In Switzerland experiment stations are maintained where virgins can be mailed to be fertilized in an apiary of select drones. It would seem that the United States is rich enough to provide some such stations, and a request by the National Association might secure it.

If not, surely a number of members of the association might be found who would take sufficient interest in the matter to subscribe a small sum each, and establish a mating station on some isolated point, where a small apiary could be kept consisting of colonies bred from queens that showed not less than a hundred and fifty pound record. Two or three years of selective breeding in such a yard should work wonders.

Stouffville, Ontario, Can., Jan. 31st, 1911.

A Poor Testimonial for the Caucasians.

F. A. STROHSCHIEIN.

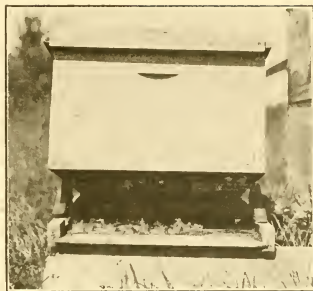
TSEND a photograph showing how a Caucasian colony contracted a $\frac{3}{8}$ -inch entrance with propolis. They finished the entire entrance after the photo was taken, leaving

small openings all along to go between the frame end-bars.

These bees do not work with as much energy, it seems, in gathering honey as they do in gathering propolis.

E. A. Morgan of South Dakota (see *American Bee Journal*, page 483, last volume), praises Caucasians highly, and even thinks that they are destined to supersede the Italians. My experience does not coincide with his. With me the queens (only a few) have not been as prolific as those of the Italian race. The Caucasians I possess are certainly poorer honey gatherers than the Italians. Their gentleness has been lauded more than any other characteristic. I can handle them without the use of smoke, and not get stung, but I must be careful. If they are handled roughly they will "pepper" it to the operator as do other bees.

I will get rid of mine and will advise others not to spend time and money with the Caucasians. I did not spend money for the queen, as I got her gratis



Entrance contracted with propolis
by Caucasian bees.

from the Government apiaries at Washington; nevertheless, I am money out (and experience ahead) for having tried them.

Metz, Wis.

Melting Wax with Honey Gives the Latter a Flavor and a Color.

W. Z. HUTCHINSON.

LEARNING that my brother Elmer had given the capping melter an extended trial last year, I wrote him for particulars. His reply is as follows:

"You ask if I used the capping melter last fall; if the wooden jacket was any help; if it injured the flavor or color of the honey; and if I expect to continue its use in the future.

Yes, we used it while we extracted about 18,000 pounds of honey; enough to give it a pretty fair test. The wooden jacket was a help only in one way: it didn't take so much oil to keep up the necessary heat to run the thing. But when you run so much honey and wax through as we do, you have to keep it so *hot* in order to keep the cappings melted and out of the way, that it colors the honey too much, even to mix in a large tank full of honey.

You take a water-white honey like the willow-herb, or raspberry honey, and it don't take very much to give a tinge of color to it. Then the flavor is affected, too. I never yet saw any honey that wax was melted with it that it didn't give the honey an off taste.

I expect to make me a large uncapping tank to use the coming summer. It will be about six feet long and seventeen or eighteen inches wide. Then I will get a shallow vat made of galvanized iron to cover the bottom and part way up the sides, and have a hole and spout in one end to let the honey drain off in a tub. Then I will have a tray of coarse wire cloth, about a $\frac{1}{4}$ inch mesh of heavy wire, to hang in three or four inches up from the bottom, to let the cappings fall on. I can then uncap the whole length of the tank, and the cappings, not being very

deep, I expect most of the honey will drain off from them in a very short time. When we used a barrel they piled up so deep, and there is such a weight there, that they are packed so solid in the bottom that the honey drains off very slowly. After they have drained a day or so in the tank then I may run them through the uncapping melter and get out what little honey there is left."

Here at Flint we had about a barrel of cappings. We allowed them to stand and drain several weeks, then melted up the cappings with a very simple melter. It was only a piece of galvanized iron turned up at the sides and back end, and joints soldered. No water was used. The arrangement was mounted on bricks over a burner of our gas kitchen-stove. The hopper was kept full of cappings which melted rapidly and honey and wax ran off into a tub. We secured 40 pounds of wax and 60 pounds of honey. I think the

honey was probably heated hotter than it would have been in a melter encased in water. The honey was *very thick*, fairly *waxy*, was darkened in color, and given a very decided waxy taste. Well, no, I don't know as it could really be called a *waxy* taste; it reminded me of caramel and was *decidedly pleasant*. I sent a sample of it to a customer who inquired about honey, offered it to him at eight cents, and he took it quick.

I have had high hopes that a capping melter would yet prove a success, but it seems that most of the large producers of extracted honey are adopting the large uncapping tank, allowing the honey to drain a few days, and then, later, in some season of leisure, run the cappings through a melter. This plan reduces the amount of melted, or heated, honey to the minimum, and it can be sold to bakeries, or to some one who likes the waxy flavor—and there are such.

Flint, Mich.

A Cheap, Novel and Effective Honey Strainer Made from a Roll of Wire Cloth.

CAREY W. REES.

I BELIEVE that at last I have learned how to make the best and simplest honey strainer; one that costs only a few cents. It is one that has served me well, straining both thick and thin honey; receiving the honey from the extractor as fast as I could extract it with no clogging or running over.

I work alone, and do not uncap and extract very fast, and my strainer is very small.

For the base I use a quart fruit can, but it will not have to be made large to receive and strain the honey as fast as any machine will extract.

I also think it will strain the thickest honey as fast as extracted.

To make this strainer, use a half-gallon tin bucket. If the upper edge has a rim, unsolder the rim so that the inside is smooth and even. The bucket or can must be straight and not flaring. Then get a piece of galvanized wire cloth, the kind that is used for door and window screens. The wire cloth should be about 12 or 14 inches wide. Roll up the wire cloth until there are about seven thicknesses of wire; then place one end inside of the can or bucket you have prepared for it. Now take some cappings and press them into the middle of the wire coil until the can it is in is about half full, or, perhaps, nearly full, when the strainer is ready for use. If one

wishes, one can cover the bottom of the wire coil with a cloth, and tie it by wrapping a string around the wire coil and cloth. I don't often use the cloth because it is a little more work to tie it on. When the day's work is done, remove the wire coil, which should have a string around it so it won't unroll. Take a screw driver and push out the cappings and scrape the bits of comb, cappings, and so forth, from the inside of the coil of wire. Put it back in the can and press in some more cappings, then it is ready for use again.

It does not need washing often.

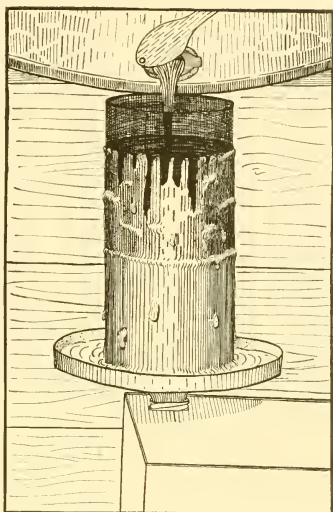
The honey should fall into the middle of this coil of wire.

If it does not strain well, use another coil of wire, and roll it until there are thicknesses of wire enough so it *will* do good work.

If it does not strain fast enough, make one a little bigger around, or higher; either one; it will not have to be very large.

It may appear to some that this will not do good work. If so, just try it and see.

I set the strainer in a flat-bottomed funnel, the funnel leads the honey into the honey can, to the honey can that rests on a pair of scales that weighs the honey in the can and strainer, and when the desired weight is on the scales the scales trip to a trigger that sets a machine running, that runs by weights, and rings a bell and shuts the honey gate every time the can is full. By using many thicknesses of the wire cloth, although it may be rather open



Rees' strainer made from a roll of wire cloth.

or big meshes, it will strain or filter the honey well. Seven thicknesses I think about the right number, but more or less can be used as desired; but the wire must stand *upright*, then it is not likely to clog. It does not clog with me. The can that the coil of wire is in has a tight bottom and the strained honey flows over the top of the can through the wire into the funnel. Sometimes the honey rises up nearly to the top of the wire coil, and strains all the way up.

LYTLE, Texas, Jan. 1, 1911.

Queen-Excluders and the Buying of Queens by Specialists.

E. F. ATWATER.

THE article in the December, 1909, REVIEW, under this heading, asks a few questions in regard to a subject with which I feel somewhat familiar.

We have a very decided liking for excluders in our extracting yards, and after an extended experience with plain excluders, mostly unbound, we prefer



The Hanson ventilator, as used by
E. F. Atwater.

those made of alternate strips of metal and wood, with a rim giving a bee-space above the slats. Not only the old plain excluders interfere more or less with the accuracy of the bee-spaces, but in removing they are easily kinked, so that quite a per cent of them "leak" queens.

But the factory-made, slatted excluders are too frail for general use. They also contain more openings than necessary or useful. In Cut A we see an excluder such as we use, with very good results. The rim is $\frac{5}{8}$ -inch thick (about $\frac{1}{8}$ -inch thicker than the rims of the excluders regularly supplied by the factories.) The slats are $\frac{3}{8}$ -inch thick,

about $2\frac{1}{2}$ -inch wide and grooved on their edges, so that five strips of two-row zinc are used. All wooden parts being $\frac{1}{8}$ -inch thicker than in the regular goods, and slats over twice as wide, makes these excluders stronger and more durable than the regular goods. The corners are not halved. This excluder also contains the feature valued by R. C. Aiken; a row of holes at the outside, so bees can pass directly up the hive-side into the super.

In Cut B, we have an example of our latest excluders, of which we have 200 in use. It is almost the same as the other, except that the corners of the rim are halved, and there is no row of openings at the extreme outside.

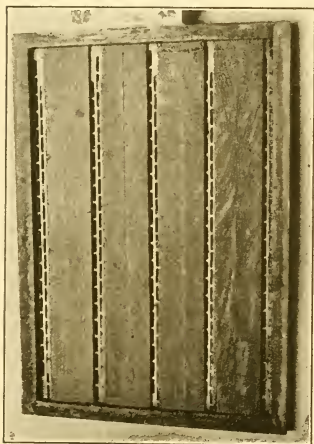
This is even stronger and more durable than the other style, as halving

the corners permits more thorough nailing, and the side strips of the rim are also firmly nailed to the outside $\frac{3}{8}$ -inch slats. Wishing to test the new wire excluders, we put two rows of it in each excluder, as shown. We think that the wire is better than zinc, as by actual measurement it is more accurate, and no doubt permits the bees to pass more freely. The only reason why more rows of openings are used in this excluder, is that we could get the narrower strips more easily than wider ones. In actual use, we find that the bees wax up the openings about the same in either style, though this may not have any bearing on the relative freedom of passage. So far as our

apiaries are concerned, the bees are not compelled to pass through the openings in the excluder, as we have a $1\frac{1}{2}$ -inch hole, protected with a Hanson ventilator, in each extracting super, and with many colonies, a large part of the gathering force goes directly into the super. We put such a ventilator in every body as they are very useful in queen-rearing on the Alexander plan, and to give extra ventilation in hot weather without lifting bodies and reversing bottom-boards. In wintering outdoors without protection, as practiced almost universally in our western country, we leave the ventilator open $5/16$ -inch, so moisture can escape, and if the lower entrance is clogged with snow or dead bees, the bees can still fly on a warm day, when such a flight may be the saving of the colony. The hive shown represents the "hole-in-the-bottom-board" plan of swarm control, and shows how the ventilators are made and used.

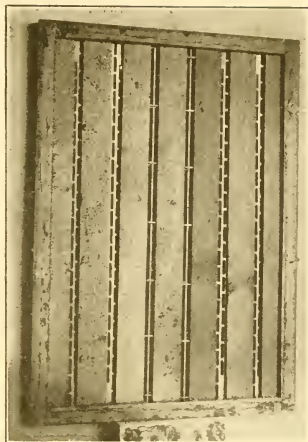
ABOUT QUEENS.

Now, in regard to queens. We rear as many as we can without much inter-



CUT A.

Atwater's queen-excluding honey-board.



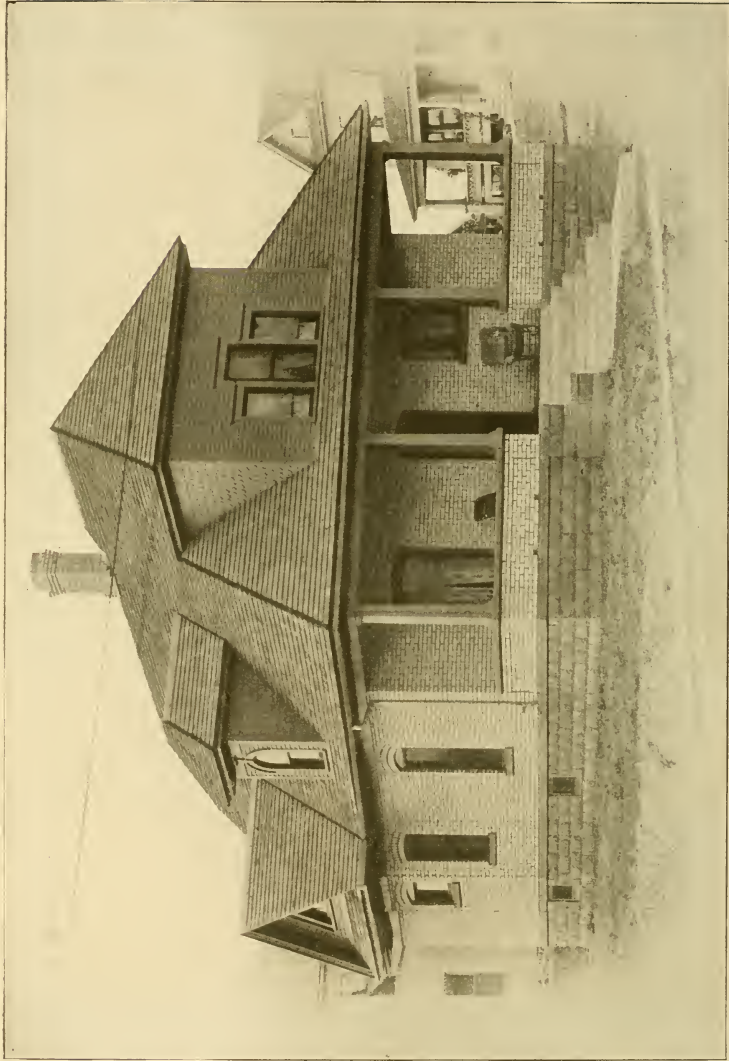
CUT B.

Atwater's queen-excluding honey board.

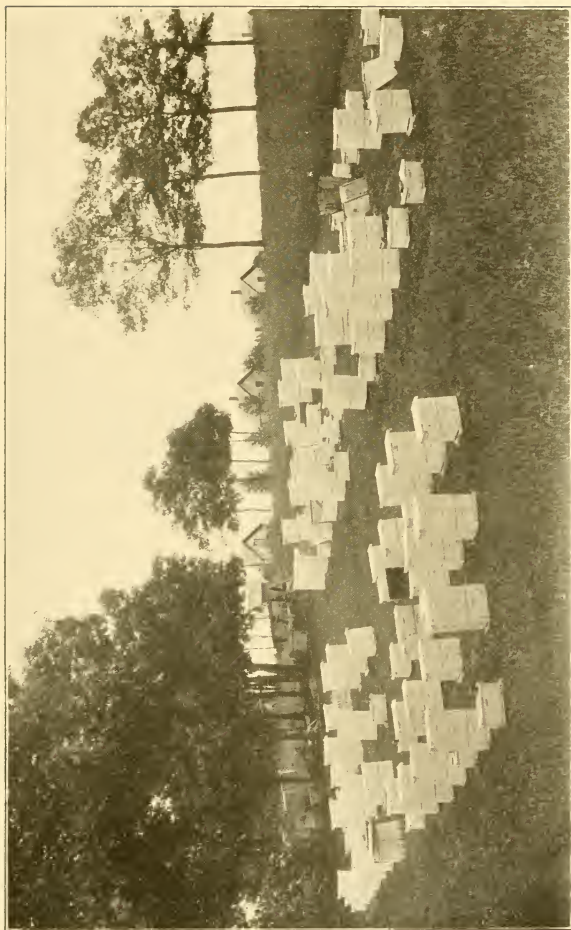
ference with our regular work. We sometimes buy in large lots with good results. One lot of about two dozen, introduced in the fall of 1908, produced last summer at least \$1 per colony more than the remainder of the yard, with honey at 6 cents. We bought 130 Banat queens from Texas and they are fine queens, seldom a dead one. Don't give your orders all to one breeder, no matter how good his stock, or you may be delayed in getting all that you have ordered, and so lose in a few days more than the value of the queens. Divide your order among two breeders of reputation, and you stand a better chance of getting what you want, when you want it.

Meridian, Idaho, Feb. 5th, 1910.

[I have never used an entrance to the extracting super. A great many beekeepers have condemned it as being useless, or at least not worth the expense and trouble of having it there. And yet often a discarded plan is picked up and found practical. I wonder how many are using upper entrances?]



Home of W. Z. Hutchinson, at Flint, Michigan.



W. Z. Hutchinson's "Review" apiary at Flint, which was a source of delight and inspiration to its owner.

Uniform Shipping Cases. Points in their Favor.

FRANK RAUCHFUSS.

Mgr. Colorado Honey Producers' Association.

UNIFORMITY of grading and uniformity of packages of all commodities produced in rural districts and afterwards brought together to be shipped in straight carload lots to distant markets is now being recognized by all shippers, whether individuals or associations, as a matter of prime importance.

In fact, the business in some of these commodities could not possibly have assumed the gigantic proportions that it has, without proper standards of grading and packing that are generally understood by the trade throughout the country. Oranges and lemons are packed in standard size boxes with grade and size indicated on the end of the box. Apples, cantaloupes, dried fruits, nuts, etc., are all packed in uniform packages if coming from localities where their production is a matter of some consequence.

It is now only in localities where these commodities are produced in a small way as a side line to farming and considered of little or no consequence that the matter of grading and packing does not receive the attention that it should.

Bee culture in Colorado has developed to such a stage that the bulk of the comb honey crop is now marketed in a fairly satisfactory manner. There is still room for improvement in many quarters as regards to proper grading. However, this is a subject outside of the scope of this paper and we shall confine ourselves to the matter of package.

Comb honey is an article that sells much on its appearance. No matter how fine it may be in flavor and body, if stored in poorly made or discolored sections and packed in unattractive

cases, it will not bring near as good a price as an article of inferior quality but properly handled and packed.

Most of our crop must find an outlet in the states east of us and can only be marketed to advantage in carload lots.

In my capacity as manager of a co-operative association of bee-keepers for the past twelve years I have had unusual opportunities to study the marketing question from all sides and have come to the conclusion that the policy of manufacturers of bee supplies in catering to the whims of individuals for new styles of sections and special cases for same is ill advised and works a hardship on the carload shipper at the point of production as well as on the jobber and retailer at its final destination.

What the carload buyer of comb honey is interested in principally is to secure stock that is carefully and conscientiously graded and packed in attractive cases of uniform size.

Any buyer of experience will gladly pay a little more for such, than to take goods of like quality but packed in a number of different sizes of sections and shipping cases. The reason for this is that it requires less time in loading the car (if bought f. o. b. shipping point), less risk of damage while in transit, less time to unload at destination, less room occupied in warehouse, and, last but not least, less trouble in making sales and better satisfaction to his trade.

A car of comb honey packed in cases of exactly the same outside dimensions (not necessarily of the same manufacture) can be loaded in less than half the time of a car composed of different sizes of cases. If honey is brought in from the apiaries and first stored in a

warehouse before being loaded in the car, then the trouble will be aggravated, as different styles of cases must be placed in separate piles.

In order to see if the manufacturers of bee supplies would be willing to recognize these difficulties I wrote last fall to several of the largest firms, and am glad to report that they all have shown a desire to come together on a standard outside dimension for 24-section, double tier shipping cases for $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ sections as well as for 24-section single tier cases. It is hoped that cases for the coming season's crop will be of uniform outside dimensions.

The following measurements were suggested:

Specifications for Double Tier Cases.

Outside dimensions for standard double tier cases for $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ beeway sections:

13 $\frac{7}{8}$ long, 9 $\frac{1}{2}$ high, 8 $\frac{3}{8}$ wide.

Full half-inch lumber for ends.

Full quarter-inch lumber for tops, bottoms and backs.

Full $\frac{3}{8}$ -inch lumber for grooved cleats.

3 sheets corrugated pasteboard for each case.

2 sheets plain paper for drip pans.

Plain 2d fine wire nails for nailing covers.

Cement coated wire nails for balance of case.

Covers printed, "Glass! This Side Up!"

Packed in reshipping crates.

Specifications for Single Tier Cases.

Outside dimensions for standard single tier cases for $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{7}{8}$ beeway sections:

18 $\frac{1}{4}$ long, 12 wide, 5 $\frac{1}{8}$ deep.

Full half-inch lumber for ends.

Full quarter-inch lumber for top, bottom and back.

Full $\frac{3}{8}$ -inch lumber for grooved cleats.

2 sheets corrugated pasteboard for each case.

1 sheet plain paper for drip pan.

Plain 2d fine wire nails for nailing covers.

Cement coated nails for balance of case.

Covers printed, "Glass! This Side Up!"

Packed in re-shipping cases.

If a discussion on the above standards could be arranged for this convention it might be the means of bringing out some valuable information.

Denver, Col., Jan. 24th, 1911.

[The above paper was read before the last meeting of the Colorado State Bee-Keepers' Convention. I am pleased to give it space in the REVIEW, as it touches a long-felt want. The importance of a uniform shipping case does not become apparent until one is handling honey in large quantities. It then becomes very evident. Why can't we have it?]

Hints on Rearing Long Lived Prolific Queens, and Improvement of Stock.

WALTER M. PARRISH.

PERHAPS the readers of the REVIEW will want to know what qualifications I possess to write about bees or queens. At the outset I will say that I commenced to study and work with bees when I was only six or

eight years old, and I well remember the day that I caught a *bombus terristris* (bumble bee) and while studying the anatomy of the bee I exercised great care to keep away from its mouth; therefore, you can imagine the result of

my investigation. I went running to the house, and while my mother was wrapping up the painful and swollen finger, I cautioned her to never get behind a bumb'e bee.

ARTIFICIALLY REARED QUEENS THE BEST.

Some think that artificially reared queens are not as good as queens reared at swarming time; but my experience is that they average better. (Of course there is no such thing as artificially reared queens—we only assist nature.) At swarming time nearly every cell is started on the bottom and end bars next to the cold bottom and sides of the hive, and cells in such remote places do not receive the warmth and care they should. Now then, on the other hand, grafted cell cups are attached to a cell bar and hung right in the center or heart of a powerful colony, and left there until the last day or a few hours before the queens are ready to hatch, hence are never chilled on a cool day or night.

A WARM ROOM FOR TRANSFERRING.

All queen rearing work, such as transferring larvae, etc., should be done in a warm room at a temperature of about 98 degrees, as the temperature of a cluster of bees is about that. Bees never expose their larvae to a cool atmosphere, and how can we expect to get good, long-lived, prolific queens from larvae that have been chilled?

There should be a large lump of royal jelly left in each cell after the queens have emerged, as it shows that they have been well nourished, but you can rest assured that if you give a powerful colony that has been made queenless and broodless, no more than twelve or sixteen grafted cells, that the embryo queens will be well fed.

SUGAR SYRUP REARS POOR QUEENS.

Queens can be reared in a queen right or queenless colony. While I rear queens both ways I much prefer a

powerful colony which has been made queenless and broodless, and if there is not a good honey flow, the colony should be fed honey diluted with water to about the same consistency as freshly gathered nectar. Under no circumstances feed sugar syrup, as honey is their natural food which has never been perverted by fire. Furthermore, I do not believe good, long-lived, prolific queens can be reared on sugar syrup. It may not make much difference the first generation, but if continued the queens would no doubt become short lived and unprolific.

LINE BREEDING ADVOCATED.

I believe in line breeding, as it is the only way we can ever expect to reach perfection, or have stock that will reproduce itself. Possibly there are a few who do not know what line breeding is, therefore I will explain. Line breeding is scientific in-breeding. We introduce new blood every few years, either on the drone or queen side, but not direct, as it might undo a good many points that we have spent years to establish or make perfect.

By careful line breeding and selection we can produce a strain very nearly non-swarming, then by giving plenty of super room and ventilation, we can reduce swarming to a minimum, and any one knows if we can keep bees from swarming we would thereby get almost double the amount of surplus honey. Of course, most any strain of bees supplied with combs already built, will gather and store honey in large quantities, but to determine which are the most energetic workers as well as non-swarmers, it is necessary to run our colonies for comb honey. To show you what can be accomplished by careful line breeding and selection I wish to state that for the last three or four years I have had no more than three swarms a year, and this year was a year of excessive swarming.

I would like to say more about queen rearing and improvement of stock, but I think I have taken up enough space for this time. Before closing, allow me to say that your success in the production of a superior strain of honey-

gatherers will be just in proportion to the time, skill, and energy you put into it, as time does not preserve that which it cost no time to create.

Lawrence, Kansas, Dec. 27th, 1909.



EDITORIAL



"Be a live wire and you won't get stepped on. It is only the dead ones that are used for door mats."

You never climbed a hill in your life by sitting down at the bottom and saying it couldn't be climbed.

Through the efforts of the New Jersey Bee-Keepers' Association, that state has a new foul brood law. Inspection work is a branch of the Bureau of Entomology, and is under the supervision of State Entomologist Dr. John B. Smith, New Brunswick, N. J. Copies of the law, and information relative to inspection of apiaries can be had upon application to Dr. Smith.

The new foul brood bill which the Michigan bee keepers were after, passed both houses, but did not get the Governor's signature. This was because it carried an appropriation of \$1,500, and not because of any defect of the bill. Bee keepers should remember however, that we still have a foul brood law, and an inspector, under the supervision of the Dairy and Food Department. Requests should be made direct to that department, at Lansing, Mich.

This Review a Double Issue.

No, we couldn't get out the June issue on time. Mr. Hutchinson died May

30th. I first learned of his death June 5th and went to Flint June 6th. I took over the Review on June 14th, and ever since I have been hustling to get out the issue before you. I felt sure the readers would prefer a double issue *on time*, than two issues away behind time, which would have been the case had I gotten out the June issue alone.

A School of Bee Keeping.

I have before me a copy of the Cincinnati Post (Ohio) dated June 16th, giving an account of a school of bee-keeping now being conducted in that city by our well known bee man, Fred W. Muth. The paper gives the school a nice writeup with a large illustration showing the school.

I have often wondered why this field was not entered by some up-to-date bee-keeper before, and I should be pleased to learn more of this venture from Mr. Muth.

Another Bunch of Live Bee-Keepers.

Over in Idaho steps are being taken to organize a Honey Producers' Association. Their work will be carried on along co-operative lines. This is a move in the right direction, but the members must remember there are some bumps ahead, and must not become discouraged when they hit a few. The mud-slinger, the kicker, and the weak-kneed fellow will be in evidence in time. Bury

the mud-slinger; strap up the kicker, and give the weak-kneed fellow a hypodermic injection of "ginger," and you'll be all right. Co-operation is all right, boys, success to you.

Mrs. Hutchinson Expresses Thanks.

Since the death of Mr. Hutchinson, Mrs. Hutchinson has received so many letters of condolence and sympathy, that she has been unable to reply to them all personally, and desires to express her thanks in the following letter:

"To the Dear and True Friends of W. Z. Hutchinson: I extend my sincere thanks for your kindness and sympathy for me in this sad bereavement. I can go around with tearless eyes, caring for the feeble ones left in my care, but the world will never know of the *lonely* hours passed, and to come.

Dear Friends, think of me kindly sometimes, and please do not forget the Review, for he loved it dearly.

MRS. W. Z. HUTCHINSON."

Has Your Letter or Remittance Been Acknowledged?

Since the death of Mr. Hutchinson there has been a mass of correspondence, remittances, etc., which it has been impossible to care for promptly. Then came the work of getting out the Review, moving the office to Detroit, and getting a line on the work. By the time this issue gets into the hands of the readers I hope to have had all correspondence cared for, but if you have not had a reply to your letter, received an acknowledgment of your remittance, or received the April or May issues of the Review, please drop me a card at once and I shall take pleasure in giving the matter immediate attention.

Having Queens Mated Above Excluders.

In at least one-half the cases where unsealed brood is placed above a queen

excluder, queen cells will be built and queens hatched. I know this from the experience of hundreds of cases, during several years; but have never tried to have the queens fertilized and begin laying in these upper stories. As nearly as I can learn, the plan of getting queens fertilized has not proven a practical success. Mr. G. M. Doolittle made a success of it, and so reported in his Scientific Queen Rearing. Later he reported that he could succeed only during the flow of honey that comes during the basswood harvest. Now he reports failure even during the basswood flow, and he admits that he does not learn why. Of course, the keeping of nuclei over a strong colony, to get the benefit of its heat, is a different "proposition," as they say, than where there is a commingling of bees between the upper and lower stories, with only a queen excluder between.

W. Z. H.

The Aspinwall Hive.

Quite often a new invention is rushed on to the market with a "hip" and a "hurrah" before there has been any time to properly test it out. Inventors are usually over enthusiastic. Not so, however, with the Aspinwall hive. Mr. Aspinwall has been working on this hive for twenty-two years. Even now, when in his opinion it is a complete success, he is putting out only a *limited* number, preferably in the hands of *experienced bee-keepers*. He wants to be sure of its success under all conditions before its general introduction.

While the claims for this hive are somewhat extravagant (that of absolute swarm control and double the amount of comb honey), yet I should hate to say they would not be realized. While in the inventor's apiary last summer, the amount of comb honey, and the condition of the same, that was on those hives was a revelation to me. I believe the hive worthy of a trial.

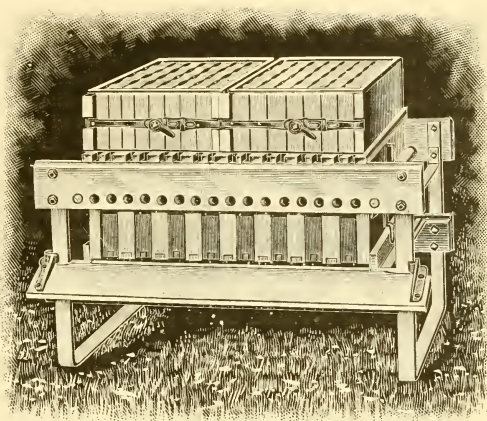
Program for the National.

In the June issue of the American Bee Journal, and in the June 15th issue of Gleanings appeared a list of proposed subjects for the National program, and a request for suggestions from the members. I have received a few such suggestions, but not enough. The proposed program above mentioned was as follows

1. President's address.
2. General Manager's report.
3. Secretary's report.
4. How can a national campaign be conducted against foul brood?
5. How to get State foul brood laws?
6. Shall the National be one separate association or an aggregation of smaller ones?
7. Is a national advertising campaign for selling honey practical?
8. A national campaign for developing markets and selling the honey crop.
9. The new constitution and by-laws.
10. Developing the home market.
11. A mail order honey trade; how conducted.
12. Question box.

These have been proposed since:

1. What can the National do along co-operative lines?
2. The advantage of apiary inspection under the supervision of the State Entomologist.
3. The Agricultural College and apiculture.
4. The disease situation in Ohio.



The Aspinwall Non-Swarming Hive.

5. The possibilities of Texas bee-keeping.

6. The State Entomologist and apiculture.

Send in your suggestions. We want full program published in the August first bee-papers. Hurry, hurry, hurry.

Retrospective and Prospective.

Today, Feb. 17th, is the 60th anniversary of my birthday, and on such occasions we are allowed to indulge in reveries over the past and of hopes for the future. From a bee keeping standpoint, I have no hesitation in saying that the most satisfactory feature that I can recall is the raising of bee culture from an auxiliary, or subsidiary, pursuit to the dignity of an independent profession or calling. When I began publishing the Review, almost a quarter of a century ago, almost everybody was advised to "keep bees." Farmers, merchants, broken-down lawyers and preachers, and invalids were told to keep a *few* bees. If anybody proposed to make a sole business of

bee keeping, he was told that it was too precarious for a sole occupation—it must be tacked onto the tail of some more stable pursuit. Many were the discussions as to “what would best combine with bee keeping?” We see them no more. The problem has been solved. The answer is “*some more bees.*” Gradually, here and there, scattered over this fair land, may be found men who with courage, vim, determination and the application of business principles, have proved that not only can bee keeping be depended upon as a sole means of livelihood, but to put money in the bank. That it must be combined with some other pursuit has been proven a *fallacy*; and the one satisfaction of my life is that I have helped and encouraged men in the production of this proof.

I am not so foolish as to assert that bee keeping can *never* be profitably combined with some other pursuit, but, in this connection, here is the point that always comes up to me: There are thousands of bee keepers with a single apiary of from 75 to 150 colonies, from which they make just about enough to keep soul and body together. They practically spend all of their time in the busy season in the care of these few bees, when by the adoption of improved methods, and the exercise of a little more vim, energy and courage, possibly the hiring of a little help, they might increase their bees and their income *five-fold*.

Under the most favorable circumstances, it is likely that my working days will be over inside of 20 years, but those years shall be devoted to helping, encouraging and inducing of bee keepers to “keep more bees.”

[The above editorial, written by Mr. Hutchinson a little over two months before his death, shows that right up to the last his thoughts were on the advancement of his brother bee-keeper. How much good he has done along that

line can not be estimated. Certain it is that many have been encouraged by his writings.

When I first began bee-keeping I was often discouraged by the pessimistic attitude of some “shining light” in “beedom.” In talking with Mr. Hutchinson about this a short time before his death, he looked up at me with sparkling eyes and said, “Well, you can’t accuse the Review of that?” and I certainly couldn’t.]

Why I Took Hold of The Review.

Flint, Mich., June 3d, 1911.

“Mr. Tyrrell:

Kind and dear friend of W. Z. Hutchinson:—I am forced to write you the very sad news of his death, May 30th. You know, of course, it can be nothing but the most serious of all things that could happen to this family.

I am writing to know if you would entertain the proposition of continuing the REVIEW. It was always a source of worry to Mr. H. that if anything happened to him the REVIEW would go down, and once he said, “Mr. Tyrrell would be a *good* man to take it; I wish he was my partner;” and so I have thought of it and *wish* you could make me a visit to talk over some of this work, as I must do something at once about it. Please think this over and visit me, if possible. Truly,

MRS. W. Z. HUTCHINSON.”

Monday night, June 5th, I returned home from the office, ready for a week’s vacation, and found the above letter awaiting me. Needless to say it was not only a surprise, but a shock as well, for I counted Mr. Hutchinson as among my choicest of friends. Only a few days before I said to Mrs. Tyrrell, “I wonder how Mr. Hutchinson is coming along. I wish I might run up and see him.” Although I knew of his illness, yet I was not looking for the end so soon.

Here was a proposition demanding the most serious consideration. I was asked to continue the work of a recognized leader, a man whose strong personality permeated every page of the REVIEW. A gigantic task, indeed, and only from the fact that I have been a close student of Mr. Hutchinson for a good many years, and am heartily in sympathy with his teachings of "Keep more bees," and "Bee Keeping as a Business," I hardly believe I would have had the courage to have undertaken it.

But the REVIEW must not go down. Although it meant that I must give up my position as Field Manager of a farmers' organization of nearly 70,000 members, a position that gave me charge of the field workers and was paying me a good salary, yet the hundreds of subscribers of the REVIEW must not be disappointed, the gospel of courage and efficiency among bee keepers must still go forward, and the thought of the vast good that could be done along this line had no little influence in my decision.

Now that I have placed my hands to the plow, I have no thought of looking back. The policies of the REVIEW will be continued along the same progressive lines. The style may be different, the personality may be different, but remember, dear reader, that the same object is sought—that of placing the business of bee-keeping on a higher plane; of taking it from among the avocations and placing it among the vocations. Bee keeping doesn't need a prop, except that of courage, care, and good common sense.

Then here's my hand, dear reader. I'm with you, and I hope you're with me. Together let us work for a greater REVIEW, a greater bee keeping, and more encouraging words to our brothers who are willing "to try."

The Importance of Preparedness.

There is seldom a year in which, sometime during the season, there is not at least a short or a light honey flow. There is an occasional year when no possible management would result even in a small surplus, but such years are very few. They are far outnumbered by those years that *might* have furnished surplus, but fail in this particular from lack of preparedness; from lack of proper management. Sometime during the summer, a honey flow is likely to stalk across the plains. If everything is in readiness we can capture it. If we are not ready and watching, it is gone before we can gather together, arm and equip our forces. If affairs take an unexpected turn, many bee keepers lose their heads or hearts, or good business sense, and don't back up their bees and keep them in readiness for action.

When forest fires swept away the raspberry pastures of Northern Michigan, bee keepers might possibly be excused for losing their "nerve," and I can tell you that it did take "nerve," the next spring and summer, to keep rolling in the barrels of sugar on the prospects that willow herb *might* furnish a crop; but, oh! the exultation of lying in the shade in August and September, and seeing the air fairly black with bees that were dropping, dropping, dropping at the entrances of hives stacked up three or four stories high, taking in a crop that eventually amounted to 20,000 pounds. Had we waited until the willow herb began to yield, the flow would have been over and gone before we were ready for it.

This watching for and being in readiness for a passing honey crop that may come and go inside of a week, reminds me of a hunter watching on the "runway" of a deer. As some of my readers know, deer have a certain route or "runway" over which they travel. If frightened or pursued they always

"run" over the same course. The hunter loads his gun and conceals himself near a "runway," where he waits hour after hour for the passing of the deer. If his gun is loaded and ready, if he keep close and constant watch, he is quite likely to bag the game. He can't stop to load his gun after he sees the deer; neither can he lean back

against a tree for a little "snooze," trusting that the deer will wait until he has finished his nap before putting in an appearance. In hunting deer or in securing a crop of honey, there must be preparedness right up to the minute, and a watchfulness that knows no relaxation.

W. Z. H.

SELECTED ARTICLES

AND EDITORIAL COMMENTS

Separating the Honey From the Cappings Without the Use of a Capping-Melter.

In June 15th issue of *Gleanings*, D. E. L'Hommedieu gives a plan for separating honey from cappings without the use of a melter, which looks feasible. In my own experience I have stirred up the honey and cappings together, getting good results, but didn't tumble to the "principle." The article is as follows:

"A few years ago, while extracting, we ran out of room, and to make room my brother took a stick and "churned" the cappings till they were completely broken up. There was no strainer in the bottom of the box, nor honey-gate, so the cappings, honey and all were together at the time. Since that time we have always mashed and churned the cappings before trying to strain the honey out. If the honey is drawn off before this is done, the plan does not work as well.

"To mash the cappings we use a small-sized ball-club with the lower end sawed off to make it square. It takes only a few minutes to prepare them for straining.

"After the mashing and turning, the cappings and honey should be trans-

ferred to a coarse cheese-cloth strainer laid over a heavy galvanized wire screen supported near the top of the tank, as described in *Gleanings* some years ago. When another lot is to be strained we gather up the corners of the first lot, tie them with a string, and hang it over a can to drain a few days. The more honey cut off with the cappings the better the plan works.

"Those who have capping melters that are satisfactory may not need to follow this method, and it may be a good many will pass this simple plan by without further thought; but I think that if a few would give it a trial it would be found to be very practical, especially with those who do not wish to bother with capping-melters.

"When the bees and extracting combs are smoked so much that one can smell the smoke while uncapping the honey, that lot of cappings is already tainted, and should not be put in with the tank of good honey. Smoke should be used very sparingly when taking off surplus honey."

In commenting on the above, Editor Root has this to say: "This certainly looks like a practical method for separating the honey from the cappings.

The plan of melting the cappings as fast as they fall from the knife involves considerable expense, to say nothing of the discomfort of working right over a two-burner gasoline stove when the weather is already too hot to work to the best advantage.

"Then, moreover, it has not yet been definitely determined that the separation by heat does not affect the flavor of honey in all cases. Our tests last summer seemed to show that the capping-melter did not darken or mar the quality of the honey.

"Friend L.'s plan is so simple and easily tried that we hope some producers will try it and report."

Advantages of Co-operation.

Wesley Foster, of Boulder, Colo., has this to say in June A. B. J. regarding co-operation:

"I wish that we might go to sleep for a hundred years or so, if by so doing we could waken with minds freed from warped conceptions of the righteousness of the competitive system. And still we need not go to sleep, either, for we have examples right before us of co-operative associations which are proving the wastefulness of a half-dozen men or concerns running around over the territory after the business that one man could easily attend to.

"On our street are seen the wagons of 20 grocers, but we do not have 20 postmen covering the same route. Why is this? It is simply that competition has been eliminated from the postal business, and it still obtains in the grocery business. In Boulder, a consumers' store has been organized, 300 families having subscribed for stock at \$100 per share. A capable and responsible board of directors has been elected, and it appears to be starting in to do the consumers and producers some good in the sale of all merchandise. The stock is not to draw any dividends,

but the stockholders are to buy goods at cost plus operating expenses. This is true co-operation, and will no doubt succeed if carried on honestly and wisely.

"I never heard of a co-operative venture succeeding where the members were not enthusiastic advocates of the principle of co-operation. If you believe that men can do business better together than independently, and have enough others with you who believe the same way, you can make a success of a co-operative honey-marketing and bee-supply-purchasing association. It requires a certain mental attitude to make a good co-operator. Such will talk more about 'we' than he will about 'I.'

"If you are a little doubtful about co-operation, get some books telling the story of co-operation the world over—you can find something about it in almost any library—and read about the way the thing is working. Dr. Lyman Abbott, who can not be charged with being exactly a Socialist, said that the 'capital and labor' question would never be settled until the man who used the tools owned them. This means that we honey-producers must eventually own our sources of production of bee-supplies, and our means of distribution—the commission and distributing houses.

"The farmer bee-keeper of a few years ago could go to the woods and select his logs and saw them into bee-hives for his own use, and he could sell his honey direct to the consumers, who were generally his neighbors. But now things have become so complex through specialization that such direct contact with the source of hive-supplies and market is impracticable if not impossible. Co-operation has for its aim the return to this direct relation between source of supply and distribution through the means of the co-operative association. Why should the bee-keepers be behind the farmers in laying hold

of the means of production and distribution? The farmers own some 30 stores in Colorado at the present time, and they are fast multiplying."

Personally I am in sympathy with the principal of co-operation. It is surprising how this movement is gaining ground among the producing class. Its ultimate success is only a matter of time.

But I am not in sympathy with about 99 per cent of the co-operative plans advocated. I should judge that the Boulder store mentioned in the above article is one of the 99. Price-cutting and something-for-nothing plans have been tried and failed. They always will fail. Reduce your price; your competitor does likewise, and away go your props from under you. The fellow who didn't co-operate gets as much benefit as the one who did. Hence the co-operator gets dissatisfied, enthusiasm changes to indifference, and your venture is a failure.

It is all right to say that your co-operators will stand by your plan on loyalty. A few of them will, but the majority will not. You must show them the benefits by definite results. You have the weakness of human nature to deal with, and your plan must meet that condition.

Is there such a plan? There certainly is. It has been in operation in England for years. With a few changes it can be adapted to this country. I will try and tell you more about it later.

LOCAL SHIPMENTS OF COMB HONEY.

Read at the Colorado Bee-Keepers' Convention

BY FRANK RAUCHFUSS.

Owing to an almost entire honey crop failure in Northern Colorado during the season of 1910, local shipments of comb honey from other sections of the State became necessary. Some of these

shipments were made by express, but most of them by freight, as our experience in former years with express companies has been that it is simply a matter of paying higher charges for a poor service.

Having received many local shipments during the past fall, ranging in lots of 12 cases to several hundred cases, and in distance of shipment from 75 to 450 miles, we have had plenty of opportunity to experiment as to what is needed to make the shipping of small lots of comb honey during cool or cold weather a success, and will herewith give some of our observations:

While warm weather prevailed shipments came through in fairly good condition.

When cold nights came on, no shipment arrived in good condition when cases were shipped singly (glass always protected by thin boards), whether packed in single or double tier cases.

Honey in double-tier cases came through with much less breakage than that in single-tier cases.

Honey produced without bottom starters in the sections broke down more than with the bottom starters.

Single-tier cases and also double-tier cases crated together with lath (4 cases in a crate) came through in very bad condition; however, in explanation it may be stated that these came the longest distance, and were transferred twice in transit, and the damage most likely was done in the transferring by tumbling the crates around, as they have no projecting handles.

Single-tier cases with the new and much-praised sliding covers have proven a dismal failure, as the cases had to be tied with string in transit to keep them from falling apart.

Large printed cards with lengthy instructions to freight handlers proved of little or no value; evidently they were too long to be read.

The only lots that came through during cold weather *without damage* were those that were shipped in 8-case carriers, with straw or hay beneath the cases, and projecting handles at the ends of the crate. While these handles are of little value to carry the crates, they seem to prevent the placing of the crates on end in the cars, and prevent their being tumbled about.

As the damage in these local honey shipments not packed in carriers has been so frequent that we have come to the conclusion to notify our members that after this we shall not receive any local shipments of comb honey unless packed in carriers. Another advantage of the carriers is that the cases are protected, and arrive in clean condition.

The present rulings of the Western Classification do not make any distinc-

tion between comb honey shipped in single cases, glass protected, and comb honey shipped in 8-case carriers, which in manifestly a hardship to the producers, and the reason why the use of these carriers for shipments is not more general. I am, therefore, trying to enlist the support of large jobbers and shippers of comb honey within the territory of the Western Classification, to urge the Western Classification Committee to rule that comb honey in carriers with straw or hay beneath the cases shall go as second-class freight, for the reason that it will take less time to handle them, and the danger of damage is reduced to a minimum, thereby saving the railroads many damage claims. I hope that this move will find the support of this Association at its present session.

Denver, Colo.

WHOLESALE

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Ask us for prices on the goods you will need this season. Discount for early orders. Send us your subscription to *Gleanings in Bee Culture*—one year and a bee veil with a silk tulle front for \$1.25 postpaid. Send for Catalog.

M. H. HUNT & SON

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Good Bee Supplies at Low Prices

I have 65,000 section holders that I will sell at \$1.00 per 100, as long as they last. They are nicely made, dovetailed and of the right style for the $4\frac{1}{4} \times 4\frac{1}{4}$ $1\frac{1}{2}$ sections, also some for the 4×5 $1\frac{3}{4}$ section holders for $4\frac{1}{4} \times 4\frac{1}{2}$, and $4 \times 5 \times 1\frac{3}{4}$ sections.

I have 45,000 Langstroth brood frames at \$1.50 per 100 as long as they last. Some are with V-shaped top-bars, and some with two grooves and wedge. Also some all-wood, or loose hanging frames.

I make the finest polished sections on earth, and want to prove it to you. Car load lots a specialty. Send for catalog. 4-11-4t

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GOOD QUEENS

are a good investment. My Italian queens are reared right; in strong colonies, from the best stock. W. Z. H. has been buying them in years past and will get more this year. No bee disease. Satisfaction guaranteed. June, 90c, 6 for \$4.75, later, 70c, 6 for \$3.75. Less by the hundred. 4-11-tf

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ITALIAN QUEENS

The most gentle, and beautiful, and the best that money can buy. Untested, 75 cts.; tested, \$1.00. Write for prices on nuclei and bees by the pound. C. B. BANKSTON, Buffalo, Texas. 4-11-tf

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of 2 to 4 cents per gallon. Process and right to make it two years, 25c

C. W. Dayton, Chatsworth, Calif.



you need a nice yellow Italian Queen at once, send to J. L. FLAJEN, ALMA, MO. Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

Larva Transplanter

You can combine EVERY advantage of ALL the best known queen-rearing systems by using the

EUREKA LARVA-TRANSPANTER

described in Gleanings, Dec. 1st, pages 765-6. Price fifty cents, postpaid. 5-11-1t

MARK W. MOE,

1716 Exposition Ave., Denver, Colo.

Italian Queens Nuclei Bees by Pound.

Ten-page descriptive list free. Send for it—you have my address, and I have not yours—before placing your order. Leaflets, "How to Introduce Queens," 15c; also "Increase," 15c; both for 25c. 4-11-tt

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Standard hives with latest improvements, Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER HONEY JARS

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POUDER, Indianapolis, Ind.
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Comb Honey Wanted

We are in the market for fancy *comb honey*. Can also use some extracted honey. We will buy it outright or sell it for you on consignment, whichever you prefer.

Write us just what you have to offer, style and weight of package, and your lowest price on any quantity f. o. b. Detroit, Mich.

REFERENCES:

Dunn Mercantile Agency.
Bradstreet Mercantile Agency.
First National Bank.
Editor of this Journal.

F. P. Reynolds & Co.,

Wholesale Fruits & Produce,
40-42 Griswold St., Detroit, Mich.
Phones M. 5332, C. 5332.

MEXICO AS A BEE COUNTRY

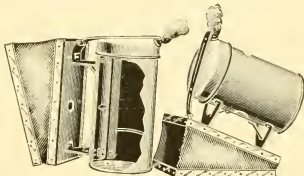
B. A. Hadsell of Buckeye, Arizona, one of the largest bee keepers in the world, has made three trips to Mexico investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated pamphlet describing the tropics of Mexico as the Bee Man's Paradise, which he will mail free by addressing him.

B. A. HADSELL, Lititz, Ariz.

5-11-41

GOLD MEDALS

St. Louis Exposition 1904.
Jamestown Centennial 1907.



Danzenbaker's Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The perpendicular **Fire Draft Grate**, forcing air **Both Ways**, makes and **Cools** the smoke, forming a **Double Fire-Wall for Securely riveting the Double-Braced** brackets to the cup, that is **Firmly Bolted** to the valveless bellows by **Locked Nuts**.

The **One-Piece** cap **Can Not Clog**. It is the **Coolest, Cleanest, Strongest, Best, and Largest Net Capacity** of all Smokers selling at one dollar (\$1.00). We **Guarantee Satisfaction** or **return the price**; only three complaints in **six years**.

Danz. $3\frac{1}{2} \times 7\frac{1}{2}$ inch Prize Smoker, \$1.00; by mail \$1.25. With Bee Keepers' Review, \$1.00 year, and Prize Smoker, \$1.75. Danz. $3\frac{1}{2} \times 6$ inch Victor Smoker, 80c; by mail, \$1.00. With Bee Keepers' Review one year, \$1.50.

We send **propolis shields** with Danzenbaker Hives and Supers, and sell anything in the bee line at **factory prices**; also select 3-banded Italian Queens and Bees.

Please send the address of yourself and B-friends for **free** catalogs and **prices** on Bee Supplies, Bees, Queens, Hives, Supers, Sections and Smokers.

F. DANZENBAKER, Norfolk, Va.
68-70 Woodside Lane.

Wanted

Price Beeswax. Write stating price and quantity for sale. **THE HAM & NOTT CO., Limited, Mfrs. Bee Keepers' Supplies, Brantford, Ontario, Canada.**

Advanced Bee Culture

A New Edition

The new edition of ADVANCED BEE CULTURE is now ready for delivery.

So many changes have been made that it is almost a new book. Quite a number of chapters have been dropped entire while entire new chapters have been added. Many have been largely rewritten. The most new matter has been added on the management of our apiaries, and the production and sale of large quantities of extracted honey at an advanced price.

Some of the pictures have been dropped, and many new new ones added.

The number of pages has been kept about the same, but the publishing facilities of the A. I. Root Co. have allowed the price to be reduced to an even \$1.00, postpaid. Review one year and the book for only \$1.90.

E. B. TYRRELL, 230 Woodland Ave. Detroit, Mich.

COMB FOUNDATION

Bee Keepers' Supplies

The Dittmer Process Comb Foundation
Pleases.

It is made on new, improved machines
and the bees take to it more readily than
any other comb foundation on the market.
Our Wax Circular and Bee Supply Price
List free upon application.

Write us your wants—it is no trouble
to us to answer letters.

GUS. DITTMER CO.,

Augusta, Wis.

PROTECTION VEIL . . .

Postpaid, all cotton, 50c; silk face, 60c; all silk, 90c; with B or ballast cord, 10c per veil extra. Flexible-rim bee-hat, 30c; Oil duck gloves, long sleeves, 35c.

Middlebury, Vt., May 26th, 1911.

A. G. Woodman Co., Grand Rapids, Mich.

Gents: Veils received and we think the ballast cord a great improvement in your veil, which was already the best to be had.

J. E. CRANE & SON.

The heavy ballast cord (B) is a new feature to keep the veil from blowing in on the face. The cord A runs around the lower edge of veil, holding it down snugly on shoulders away from the neck, making a tight fit so bees do not get under. Cord C is a short one with loops in ends with cord A running through them, making it adjustable.

A. G. WOODMAN CO.

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Michigan.



GOOD QUEENS

My 14 years of experience enables me to know what good queens are, also how to rear them. I can furnish three or five-banded golden Italians, reared in strong colonies and mated in three-frame nuclei. I have five different strains, so there will be a direct cross in the matings. Orders can be filled now by return mail at the following prices: Untested \$1.00; six, \$4.50; twelve, \$8.00. Tested, \$1.50; six, \$7.50; twelve, \$13.00. Breeders, \$3.00. Three-frame nucleus \$3.00. Add price of queen wanted.

A. B. MARCHANT,
Summatra, Fla.

D. Cooley can fill your orders with the
A. I. Root Company's

Standard Bee Supplies

On short notice. Catalog free.

D. COOLEY, Kendall, Michigan.

ITALIAN BEES and Queens and
supplies. Root's
standard goods. Ask for circular. Aliso Apiary,
El Toro, Calif. 2-10-111

Sections at \$3.50 per 1000

We are making this big sacrifice in price to move a lot of 500,000 we have in our warehouse. These are the regular one piece $4\frac{1}{4} \times 4\frac{1}{4} \times 1\frac{1}{4}$ two beeway Basswood Sections. They are No. 2 quality, and listed at \$5.00 per 1,000. Send in your orders now before they are sold out.

Our Shipping Cases are recommended by the largest honey buyers in the country. Covers and Bottoms are one piece, everything is Basswood, smooth on both sides, no-drip sticks or corrugated paper in bottom. We make these to fit any number or size of sections. We have on hand a large stock to hold 24 sections, which we offer complete with paper and 2-inch glass, at \$13.00 per 100; Crates of 50, \$7.50; Crates of 25, \$4.00.

Write for catalog and prices on Hives, Frames, Foundation, or anything you need in the apiary.

Minnesota Bee Supply Co.

Nicollet Island

Minneapolis, Minn.

White Comb Honey

Fancy and No. 1.

We need Large Quantities and
Can Use Yours

American Butter & Cheese Co.
31-33 Griswold St. Detroit, Mich.
WRITE US

New Catalog Now Ready

Of Dovetailed Hives, Marshfield Sections, Dittmer's Foundation and all kinds of bee keeper's supplies at Reduced Prices, (car loads in stock). Also all kinds of Berry Baskets, Hallock Cups, Hallock Boxes and Crates to match.

Honey and Beeswax Wanted, Wax 30c
W. D. SOPER, Jackson, Mich.
323-325 S. Park Ave.

The Finest Honey

We have the finest honey in Texas. It is from the Catslaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas.
Address W. B. DAVIS, Del Rio, Texas.
6-10-16

WANTED

Early orders for the Old Reliable Bingham Bee Smokers. Address

T. F. Bingham, Alma Mich.

Queens of Moore's Strain of Italians

Produce workers that fill the supers, and are not inclined to swarm.

They have won a world wide reputation for *honey-gathering, hardiness, gentleness, etc.*

My queens are all bred from my best *long-tongued, three-banded, red-clover stock* (no other race bred in my apiaries) and the cells are built in strong colonies well supplied with young bees.

Prices: Untested queens, \$1.00 each; six, \$5.00; doz., \$9.00. Select untested, \$1.25 each; six, \$6.00; doz., \$11.00. Safe arrival and satisfaction guaranteed. Descriptive circular free. Address,

J. P. MOORE, Queen Breeder
Morgan, Rt. 1, Ky.

Honey Quotations

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent, when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1 white comb honey, 15 to 16c; fancy white extracted, 12c; beeswax, 30c.

June 20th.

BLAKE-LEE CO.,
4 Chatham Row.

NEW YORK CITY—There is practically nothing doing in comb honey. Our stock of white is pretty well cleaned up and there is some demand at around 13c to 15c, according to quality. Off grades, mixed and buckwheat, are not wanted at any reasonable price, and we will probably be compelled to carry over some of it. Extracted in good demand, new crop from the South is arriving now, and finds ready sale at from 65c to 90c per gallon, according to quality. West Indian is arriving freely, and selling at from 73c to 80c per gallon, according to quality. No California in the market yet, and do not expect to have any for some time to come. Beeswax steady at 30c per pound.

HILDRETH & SEGELKEN,
June 20th, 82 Murray St.

CHICAGO—There has been practically no sales of comb honey during June. There remains unsold very little of the white grade that is suitable for retail purposes. Some lots of amber remain. Neither do we learn of much being done in extracted. The prices will be nominal until the coming of the yield of 1911. Beeswax sells at 31 cts. to 32 cts. per pound, if clean and of good color.

R. A. BURNETT & CO.,
June 19, 199 S. Water St.

CINCINNATI—These are dull times in honey business, no comb honey to offer and no demand. It is a little too early to prognosticate the honey crop. We have some 1911 crop fancy water white honey which is of the very finest, delicious flavor and color, which we sell in crates of two 60 pound cans at 10c a pound; and amber honey in barrels from 6c to 7c a pound; and for choice, bright yellow beeswax free from dirt, we are paying 29c cash and 31c in trade.

THE FRED W. MUTH CO.,
June 20.

KANSAS CITY—There is no comb honey on our market, the crop of 1910 being all cleaned up; receipts of new No. 1 Comb would sell for \$3.50 per case of 24 sections, and No. 2 stock for 25 cents less; amber at \$3.00 to \$3.25. There is some old extracted on the market selling at 8½ to 9 cents for white, amber bringing 7 to 8 cents. Beeswax selling at 25 to 28 cents.

C. C. CLEMONS PRO. CO.,
June 19.

TOLEDO—The market is bare of honey of any description, and no demand at present to speak of. Fancy comb would bring 16c in a small way, and there is some call for extracted, but not enough to justify packing as yet.

S. J. GRIGGS & CO.,
June 24.

ROOT'S GOODS

For Western Pennsylvania.

Orders filled promptly and with care. 400 Ideal supers with inside fixtures for comb honey, slightly used, good as new, 35 cts. each. Empty eight frame hives, same as above, with frames included, \$1.20 each.

GEO. H. REA, Reynoldsville, Pa.

1f

To you who buy

QUEENS

We breed Carniolan, 3-Band Italians, Caucasians and Goldens. Ready to mail April 15. Order now to insure your queens when you need them. Address **JOHN W. PHARR,** Berclair, Texas.

2-11-1f

**THIS BRAND MEANS
BEE SUPPLIES
Scientifically Made**

OUT OF

Good Material

TAKE NO OTHER



**30 DISTRIBUTING HOUSES
SEND FOR FREE ANNUAL
1911 CATALOG**

GIVING NAME OF NEAREST ONE

G. B. LEWIS CO.

WATERTOWN, WIS.

Root Section Honey Boxes

Concerning the importance of buying the best and our ability to furnish sections of a superior quality to bee keepers everywhere.

OUR SECTION MAKING DEPARTMENT we believe to be the best equipped in the world. We claim superiority of workmanship in several respects, especially in smoothness of the dovetailing and the ends of the sections. They are polished on both sides in double-surface sanding machines, and are therefore uniform in thickness. Too much importance cannot be attached to putting up comb honey in sections of uniform quality and experienced honey producers agree that **ROOT SECTIONS** of either A or B grades are a most essential investment.

PRICE LIST OF SECTIONS

Root Sections come in several standard styles and sizes—with or without bee-way as follows:

4¼x4¼ BEEWAY SECTIONS.

2 in., 1½¹⁶, 17⁄8, 1¾ or 7 to ft. wide.

We send 17⁄8 style 2 beeway when your order does not specify style or width wanted.

Quan.	Grade A	Grade B
100	\$ 80	\$ 70
250	1 60	1 40
500	2 75	2 50
1000	5 50	5 00

PLAIN OR NO BEE-WAY SECTIONS.

4¼x4¼x1½, 15⁄8, or 13⁄8 or 4x5 x13⁄8 or 1½; or 35⁄8 x 5 x 1½. We send 4¼ x 1½ plain, or what will fit other items in your order, if you do not specify.

Quan.	Grade A	Grade B
100	\$ 80	\$ 70
250	1 60	1 40
500	2 75	2 50
1000	5 25	4 75

One hundred sections weigh about seven pounds.

BETTER ORDER a supply of ROOT'S WEED PROCESS FOUNDATION with your sections. 1910 sales on this superior product totaled nearly 200,000 lbs. Samples with full information and prices may be had upon request.

REMEMBER—We carry complete stocks at this branch and guarantee quick delivery on sections in lots of 100 to 1,000,000 and on foundation and other supplies in any quantity. You ought to know the complete ROOT LINE for every appliance for successful bee keeping. Get the new catalog, brimful of the most modern supplies priced at rock bottom figures for goods of the quality we have manufactured for more than 40 years.

The A. I. Root Company
Medina, Ohio

AUGUST, 1911.



Detroit, Michigan, \$1.00 a Year.

Bee-Keepers' Review

Published Monthly

E. B. TYRRELL, Editor and Publisher

Office—230 Woodland Ave., Detroit, Mich.

Application for entry as second class mail matter made at Detroit, Mich.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

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Objects of the Association

To promote and protect the interests of members.

To prevent the adulteration of honey.

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BEE KEEPERS

We make the best polished, and have the whitest section. This signifies quality. Get our prices. Prompt shipments. We have a full line of Bee Supplies. Send for catalog.

AUG. LOTZ & CO., Boyd, Wis.

5-11-11

GOLD MEDALS

St. Louis Exposition 1904.
Jamestown Centennial 1907.



Danzenbaker's Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The perpendicular **Fire Draft Grate**, forcing air **Both Ways**, makes and **Cools** the smoke, forming a **Double Fire-Wall** for **Securely** riveting the **Double-Braced** brackets to the cup, that is **Firmly Bolted** to the valveless bellows by **Locked Nuts**.

The **One-Piece** cap **Can Not Clog**. It is the **Coollest**, **Cleanest**, **Strongest**, **Best**, and **Largest Net Capacity** of all smokers selling at one dollar (\$1.00). We **Guarantee Satisfaction** or **return** the price; only three complaints in six years.

Danz. $3\frac{1}{2} \times 7\frac{1}{2}$ inch Prize Smoker, \$1.00; by mail \$1.25. With Bee Keepers' Review, \$1.00 year, and Prize Smoker, \$1.75. Danz $3\frac{1}{2} \times 6$ inch Victor Smoker, 80c; by mail, \$1.00. With Bee Keepers' Review one year, \$1.50.

We send **propolis shields** with Danzenbaker Hives and Supers, and sell anything in the bee line at **factory prices**; also select 3-banded Italian Queens and Bees.

Please send the address of yourself and B-friends for **free** catalogs and **prices** on Bee Supplies, Bees, Queens, Hives, Supers, Sections and Smokers.

F. DANZENBAKER, Norfolk, Va.

68-70 Woodside Lane.

SWARTHMORE'S PEDIGREED

GOLDENS

Queens from the well known SWARTHMORE Apiaries of the late E. L. Pratt. The brightest **hustlers** and the most **gentle** pure strain of Goldens in the United States.

The Swarthmore Apiaries, Swarthmore, Pa. 7-11-31

BEE SUPPLIES

You will find it to your advantage to send for our 1911 catalog. We promise Good Goods. Prompt Shipment and Fair Treatment. Give us a trial order and you will not regret it. Try our Splendid Telescope Hives. They give satisfaction wherever used. Made from the celebrated red wood of the Pacific Coast.

E. T. FLANAGAN & SONS, Belleville, Ills.

2-11-12

White Comb Honey

Fancy and No. 1.

We need Large Quantities and
Can Use Yours

American Butter & Cheese Co.

31-33 Griswold St.

Detroit, Mich.

WRITE US

**THIS BRAND MEANS
BEE SUPPLIES
Scientifically Made**

OUT OF

Good Material

TAKE NO OTHER



**30 DISTRIBUTING HOUSES
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GIVING NAME OF NEAREST ONE

G. B. LEWIS CO.

WATERTOWN, WIS.

Queens of Moore's Strain of Italians

Produce workers that fill the supers, and are not inclined to swarm.

They have won a world wide reputation for *honey-gathering, hardiness, gentleness, etc.*

My queens are all bred from my best *long-tongued, three-banded, red-clover stock* (no other race bred in my apiaries) and the cells are built in strong colonies well supplied with young bees.

Prices: Untested queens, \$1.00 each; six, \$5.00; doz., \$9.00. Select untested, \$1.25 each; six, \$6.00; doz., \$11.00. Safe arrival and satisfaction guaranteed. Descriptive circular free. Address,

J. P. MOORE, Queen Breeder
Morgan, Rt. 1, Ky.

LEWIS BEEWARE

Has no superior and we can furnish it promptly.
Wisconsin and Dovetailed Hives. Sections and
everything needed by the bee keeper. Also pure
Italian Queens. Send for catalog. Beeswax wanted.

THE C. M. SCOTT CO., Indianapolis, Ind.

1003 E. Washington Street.

HAND'S Handsome Hustlers

Are a superior, honey-gathering strain of hardy, northern bred, straight, three-banded Italians, the result of years of careful selection and judicious breeding with a view of establishing fixed characteristics along chosen lines. Our queens are not only large, vigorous, handsome, and prolific, but by reason of a judicious system of line breeding they have the power of unerringly to transmit inherent tendencies of a highly desirable nature, such as hardiness, gentleness, and industry, as well as uniformity of marking, which makes them especially valuable as breeders. Warranted \$1.00; six, \$5.00; dozen, \$9.00. Tested, \$1.25; three-(L) frame nucleus, no queen, \$3.25; half-pound package of bees, no queen, \$1.00. Add price of queen to price of nuclei and half-pound packages. No disease. Safe delivery and satisfaction guaranteed. Circulars and valuable information free.

J. E. HAND,
Birmingham, Ohio, U. S. A.

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of
2 to 4 cents per gallon. Process and right to
make it two years, 25c

C. W. Dayton, Chatsworth, Calif.

WE want to buy white comb and extracted honey in car lots or small shipments. We pay cash on arrival. Mail sample extracted and quote price you expect to get for it. We will mail empty bottles on request.

E. R. PAHL & CO.,
Milwaukee, Wis. Established 1894.

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

MARSHFIELD MFG. CO.
Marshfield, Wis.

To you who buy

QUEENS

We breed Carniolan, 3-Band Italians, Caucasians and Goldens. Ready to mail April 15. Order now to insure your queens when you need them. Address JOHN W. PHARR, Berclair, Texas. 2-11-tf

Large quantities of comb and extracted

HONEY WANTED.

Write us for prices, stating quantity and grade.

American Butter & Cheese Co.
612-14 Broadway Cleveland, Ohio

PROTECTION VEIL . . .

Postpaid, all cotton, 50c; silk face, 60c; all silk, 90c; with B or ballast cord, 10c per veil extra. Flexible-rim bee-hat, 30c; Oil duck gloves, long sleeves, 35c.

Middlebury, Vt., May 26th, 1911.
A. G. Woodman Co., Grand Rapids, Mich.

Gents: Veils received and we think the ballast cord a great improvement in your veil, which was already the best to be had.

J. E. CRANE & SON.
The heavy ballast cord (B) is a new feature to keep the veil from blowing in on the face. The cord A runs around the lower edge of veil, holding it down snugly on shoulders away from the neck, making a tight fit so bees do not get under. Cord C is a short one with loops in ends with cord A running through them, making it adjustable.

A. G. WOODMAN CO.

Grand Rapids,
Michigan.



ITALIAN QUEENS

By return mail, untested, 75c each. Tested, \$1.25. Breeders, \$3.00. Carniolans, Cyprians, Banats, Caucasians, untested, \$1.00. Tested, \$1.50. Breeders, \$3.00. Two 5-gallon honey cans in case, 59c. One-gallon, \$8.25 per 100. One-pound Powder bottles, \$3.75 per gross, in crates. In reshipping cases, \$4.50 per gross.

Choice honey wanted and for sale. Send sample with price. Bee supplies at bottom prices. Send for catalog.

WALTER C. MORRIS,

74 Cortland St., New York, N. Y.

"Griggs saves freight."

TOLEDO

is on a direct line to you. This means promptness and a saving in freight. We have a large stock of

ROOT'S SHIPPING CASES.

Put your honey up right. We handle COMB and EXTRACTED HONEY, Cash or on Commission. Write us before you sell. Free catalog for the asking.

S. J. GRIGGS & CO.,

No. 26 N. Erie St., Toledo, O.

The Finest Honey

We have the finest honey in Texas. It is from the Catslaw; is a very light amber, but much like white clover. It is put up in 60-pound cans, two in a case, and we offer it at 9 cts. a pound F. O. B. here in Texas.

Address W. B. DAVIS, Del Rio, Texas.
6-10-tf

MEXICO AS A BEE COUNTRY

B. A. Hadsell, of Buckeye, Arizona, one of the largest bee-keepers in the world, has made six trips to Mexico, investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated 32-page booklet describing the tropics of Mexico as a Bee Man's Paradise, which is also superior as a farming, stock raising and fruit country, where mercury ranges between 55 and 98. Frost and sun-stroke is unknown. Also a great health resort. He will mail this book free by addressing

B. A. HADSELL, Lititz, Pa.

Good Bee Supplies at Low Prices

I have 65,000 section holders that I will sell at \$1.00 per 100, as long as they last. They are nicely made, dovetailed and of the right style for the $4\frac{1}{4} \times 4\frac{1}{4}$ $1\frac{1}{2}$ sections, also some for the 4×5 $1\frac{1}{2}$ section holders for $4\frac{1}{4} \times 4\frac{1}{2}$, and $4 \times 5 \times 1\frac{3}{4}$ sections.

I have 45,000 Langstroth brood frames at \$1.50 per 100 as long as they last. Some are with V-shaped top-bars, and some with two grooves and wedge. Also some all-wood, or loose hanging frames.

I make the finest polished sections on earth, and want to prove it to you. Car load lots a specialty. Send for catalog. 4-11-14

CHAS MONDENG, Minneapolis, Minn.
160 Newton Ave., N.

Choice Honey Wanted.

We have a large and growing retail trade in the choicest comb and extracted honey. We want to get in touch with some producers who can supply us with this kind of honey. If you produce a first-class article, write us, stating what you have, how put up, and price wanted.

PIERCE BROS. CO.,
551 Woodward Ave., Detroit, Michigan.

Make Your Own Hives

Bee Keepers will save money by using our Foot Power

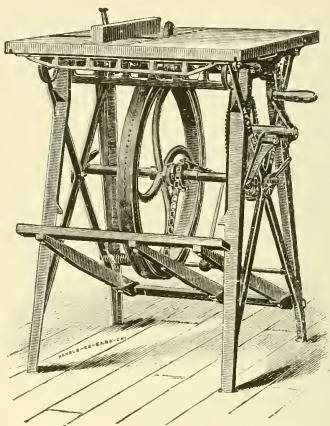
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in making their hives, sections and boxes.

Machine on trial. Send for Catalogue

W. F. & JNO. BARNES CO.

384 Ruby Street,
Rockford, - Illinois.



No Fish-Bone

is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

J. Van Deusen,
Canajoharie, N. Y.

Comb Honey Wanted

We are in the market for *fancy comb honey*. Can also use some extracted honey. We will buy it outright or sell it for you on consignment, whichever you prefer.

Write us just what you have to offer, style and weight of package, and your lowest price on any quantity f. o. b. Detroit, Mich.

REFERENCES:

Dunn Mercantile Agency.
Bradstreet Mercantile Agency.
First National Bank.
Editor of this Journal.

F. P. Reynolds & Co.,
Wholesale Fruits & Produce,
40-42 Griswold St., Detroit, Mich.
Phones M. 5332, C. 5332.



An Apiary on the Ivy Ranch, near Phoenix, Arizona, located in the famous Salt River Valley.—See Editorial.

The Bee-Keepers' Review.

A MONTHLY JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS

\$1.00 A Year

E. B. TYRRELL, EDITOR AND PUBLISHER

OFFICE OF PUBLICATION - - - 230 WOODLAND AVENUE

VOL. XXIV.

DETROIT, MICHIGAN, AUGUST 1, 1911.

No. 8.

Disposing of the Unfinished Sections.

LEON C. WHEELER

EVERY fall finds the average beekeeper with a lot of unfinished sections and sometimes it is quite a proposition to know just what to do with them. This year I tried a plan which worked so well that I must give it to you.

I have tried putting it up a la Scholl, that is, in pails with extracted honey poured over it, but must confess that I never had much success selling it that way.

This year I waited till cold weather when the honey would not run very much, and then cut it out, taking care to muss it up as little as possible, and packed it in from two to six quart pails, without putting the extracted honey on it. As a sample of how it sold let me tell you that the first hour and a half I was out I visited eight places and sold eight pails of honey. And mind you, I was not selling honey alone, but had some yarn which I had made up from my own fleeces, which also took some of my time. By the way, excuse me for getting off the subject, but you bee-

keepers who keep sheep, have you ever tried getting your wool made up and selling it in the yarn? It sells on sight for \$1.00 per pound, and they are very glad to get it at that. This brings the price of your wool to about 40 cents per pound after all expenses are paid.

Of course we cannot expect to get as big a price for this honey as for the better grades, but it will sell readily at 10 cents per pound net.

USING BAIT SECTIONS.

Some beekeepers make a practice of extracting these sections and using them as baits, and I have practised this quite a lot myself, but do not like the method as it gives me too many off grade sections when I want the fancy. I used to think this was made up by the extra amount of honey I got, but I am of the opinion now that I have been losing money by so doing. The beekeeper who sells his honey mostly around home does not as a rule care so much about fancy honey, and for such men the plan of using baits might be all right. I be-

lieve that one will get just as much though by using full sheets, and then the honey is all or nearly all fancy.

WILL USE FULL SHEETS IN SECTIONS.

I expect in the future to use full sheets entirely, that is, after Dr. Miller's fashion, with a five-eighths inch bottom starter, and a sheet reaching to within one-eighth of an inch of the bottom starter from the top.

I have been trying them out on a small scale the past two or three years, and my experience has been that on the extra amount of honey you get alone it pays for the extra expense. Bees will go onto these full sheets much quicker than starts and will make much better work of it when they do get started. At least this has been my experience.

SMOKER FUEL.

Friend Hutchinson, I notice in Advanced Bee Culture you advocate the use of coal oil or kerosene for lighting the smoker. This is not the first time I have seen this advocated and I have often wondered at it. Your experience with the use of it must have been different from mine, for I could not abide

it in my smoker for a minute. Doesn't it stink your smoker up frightfully? It did mine the only time I ever tried to use it, and not only the smoker but the honey where I attempted to use it was tainted with the coal oil smell. Worse yet, I could never succeed in getting that smell out of the smoker, and finally threw it away in disgust.

Certainly you people who advocate the use of it could not have had this experience or you would not use it. Will you please explain why the difference?

Barryton, Mich.

[Lighting a smoker with oil is something I have never tried. Don't believe I would like it. Whenever I use a smoker, or rather, get through using it, I plug up the nozzle with a bit of green grass. This puts the fire out, and leaves a good supply of charcoal in the smoker for next using. I almost always use hard wood for fuel. When ready to use again, I dump the contents of the smoker on the ground, or in a pan; put in a fair sized piece of newspaper in the smoker, light it, let it get to burning nicely, then throw in the charcoal a few pieces at a time, and finally fill up with wood. The whole operation takes about as much time as it does to write this footnote.]

A Short Method of Introducing Queens.

F. L. POLLOCK

THE best, quickest and safest mode of introducing queens is by the use of tobacco smoke. It has long been advocated by the editor of the REVIEW, and it is hard to say why so little has been heard of it lately, and so much of other methods.

The colony had best be dequeened about noon. About twilight light a small, hot fire in your smoker and put in about the amount of two pipefuls of smoking tobacco—the fine cut or long cut used for cigarettes is best, as it burns most freely. When a strong nicotine odor comes out of the smoker, blow two or three heavy puffs into the hive

entrance; wait two minutes and open the hive. Drive the bees down with more tobacco smoke and let the queen run right down on the combs, following her with another puff. Close the hive quickly. The editor recommends another slight smoking in the course of half an hour, but I have never been able to see that this made any difference, and in general the less disturbance after the queen is introduced the better.

A modification of this plan, making it even safer yet, is, instead of dequeening the hive, to take off a nucleus of three frames of bees and brood, but not the queen. Place this nucleus close beside

the parent colony and introduce the queen to the nucleus at twilight as before. The old bees will have mostly gone back, and the weak nucleus, consisting principally of young bees, will accept a queen if offered in almost any way. In three or four days, when the new queen is found laying, the old colony can be dequeened, and the nucleus put back, queen and all, immediately.

By this plan the colony is not left queenless for an hour; in fact, for some days it has two queens at work. Another advantage is that in case of failure you still have the old queen.

But if this plan is carefully adopted it is not likely that one queen in twenty will be lost, provided the nucleus is guarded from robbing.

Strouffville, Ontario, Can.

Keep More Bees. It Counts when It Comes to a Grand Total. \$5,000 from 350 Colonies.

H. G. SIBBALD

THE year 1909 gave me the largest money returns of any since I started bee-keeping twenty years ago. Other years gave higher averages per colony but this year I had more bees. About 350 colonies yielded over 50,000 lbs—4,900 lbs. of extracted honey and over 100 dozen of comb.

As I live in the city in the winter and bottle and put up in small packages for the retail grocerytrade a large proportion of my crop and thereby get a high price, this honey sold for nearly \$5,000. My help consisted of one young man who had two previous years' experience with me.

We were busy, as all the work in connection with the production of this honey, from spring until fall, including packing for winter, was done between May 1st and Oct. 15th—five months and a half.

INCREASED TO FOUR HUNDRED COLONIES.

The 350 colonies were kept in three yards each seven miles from the others and were increased to a little over 400 during the season.

Preceding the season two yards were wintered outside, four colonies in a case, two facing one way and two the opposite way, all tight together, with planer shavings around the outsides and over

the top. The other yard was cellar wintered. All wintered well, with the balance in favor of the outside wintered.

The spring work or management consisted of equalizing stores so that all had plenty (no feeding was done), unpacking, clipping queens, scraping and cleaning hives, supers, and combs.

The season's management consisted first in supering. If the bees didn't come up and occupy the super promptly, brood was raised up. All the colonies were ventilated by raising the hives from the bottom boards three-quarters of an inch. Queen rearing was started and at least 15 nuclei were kept in each yard, so that a ready supply of young laying queens were obtained whenever required. When the first super was about half or two-thirds full it was lifted up and another put in underneath. In some cases three supers were used on a hive, but as a rule the upper one was extracted in time to relieve the second super when it was ready to lift up. Stacking up too much does not appeal to me any more. It's too much trouble and work to make the weekly examinations when more than two full sized supers are used, and besides, dark honey comes in the wake of the white and we must be up with the extracting or get out beautiful white honey darkened.



Apiary of J. B. Holsinger, Johnstown, Pa.

SWARM CONTROL.

Our system of swarm control was to prevent swarming conditions as far as possible by ample ventilation, room, and re-queening. In spite of all this a percentage of them would be found preparing to swarm and were handled about as follows: If a colony was found with extra well filled supers and the cells started, probably caused by over-crowding, cells were destroyed and new empty supers of combs given, some brood raised up or taken away and full sheets of foundation or full combs given in the brood nest. This treatment would often cure such a colony of swarming.

If a colony had not been filling its supers up to the average, had plenty of bees and no very good reason for preparing to swarm, only perhaps laziness, they were treated to shook swarming and left destitute, a sure cure for such a colony.

If a queenless colony was found the cells were destroyed and a young laying queen introduced.

Superceding colonies were treated in the same way, also all colonies where the queen appeared to be failing. Every

young queen successfully introduced, makes a colony that can be counted on as safe and passed without the usual examination. If a colony is working well, from and to the entrance, no clustering there, the super showing good progress and the bees up well into the corners of it, a further examination is often unnecessary and much time can be saved.

EXTRACTING THE HONEY.

Our extracting was done much in the usual way. My helper brushed one side of the comb while I brushed the other. He then put it into a super on the wheelbarrow. I would have another ready while he was doing that and in this way we could take off say 15 or 20 supers in about half an hour and proceed to extract. No bee-escapes were used. No engine, but during the extracting season we had 14-year-old help to turn the extractor, wash tins, etc.

Such a crop could very reasonably be expected again as I have had better averages per colony many different years before and with power driven extractors and an extra helper or two, twice as many colonies could be man-

aged and larger returns made. It is my intention if the coming season is at all favorable to increase to something like 600 colonies.

Claude, Ontario.

[Publishing articles like the above may be open to criticism, on the ground that they are *exceptional* successes, and not the ordinary results obtained. But after all isn't it the *exceptional successes* that we are all after? Don't we get our greatest spur to ambition by looking at the highest success obtain-

able? What inducements are there to plod along if only *ordinary* results be secured.

Then let us have the encouraging reports. Discouragements will come fast enough anyway. There are already too many people in this world who are ready to say, with a wise (?) shake of the head, "Be careful boy, you can't do it." Such people are quite often knocked over by some poor foolish fellow, because he doesn't know any better, rushing headlong and doing it. Send on your encouraging reports, we all need them.]

Foul Brood—Its Wholesale Eradication.

FRED A. PARKER

IN the year 1910 I owned an out-apiary, about fifteen miles from Lompac. It was permeated with American foul brood. Of the fifty-eight colonies thirty were diseased, the brood of many of them being absolutely rotten. The location had proven uncertain for honey production. Its isolated position, and the necessary traveling of bum mountain roads made it expensive to operate.

I decided in October to move these bees at once and add them to another apiary I have that was clearly understocked. The latter apiary was free from disease. Its colonies possessed plenty of surplus supers and combs containing honey. These apiaries were about twenty-two miles apart.

Some of the combs in the diseased apiary had been in use more than twenty years, and I considered any process unsatisfactory that did not have for one of its objects the destruction of every one of them. It was the only sure way of making the cure permanent. As I also wanted to save the bees, hives and frames, the task before me was no joke. At that season of the year there is no honey gathered in this locality, consequently robbing will begin on slight provocation.

The hauling was done with a light spring wagon and was completed in four loads. The bees were shaken from their combs into comb honey supers. These supers were prepared by tacking wire cloth over the top of them.

Before commencing operations each evening, one of these prepared supers was placed near each colony that was to be taken. I waited until dusk had driven the bees all to their homes. By the lantern's light a canvas about six feet square was placed on the ground by the side of the colony first to be treated. The super was placed near the middle of the canvas, the screened side being down. The bees were given plenty of smoke at the entrance and under the cover. If too little smoke be given, the bees crawl all over you on a stinging rampage and fly about the lantern like flies around a sugar bowl. If they are smoked too much they become panic-stricken and run out of the hive onto the ground.

Each comb was taken out and the bees first shaken into the super with the familiar trembling motion. The ones still clinging to the combs were brushed in with a Coggsball brush. The lids, bottom-boards and hives were also

brushed clear of bees. When the insects were all in the super (and let me say now that rapid work is necessary to prevent them from crawling out of the super and making much trouble) a barley sack was placed over the opening, a flat lid laid on top of the sack and nailed down onto the super. The supers were then turned screen-side up. The discarded combs were carried into the house and tiered up by my wife, who proved a very competent assistant. The combs were left there until the bees were all moved. Then the small amount of honey was extracted from them and the combs melted. I caged no queens and in only two instances did I miss putting her in at the first operation. The bees that were scattered over the canvas were all shaken to the center and then brushed onto the screen. If any dropped to the ground the hum and odor of the cluster drew them onto the screen in a few minutes.

LOOKING FOR LOST QUEENS.

After the shaking was finished each evening, these screens were carefully scrutinized for queens. The two found outside were placed in mailing cages with a small escort of bees and the cage and super marked with the same number, so I could tell where each belonged. When loaded on the wagon these supers were put on the top tier and each queen laid on her own colony with only the two screens between the bees and their mother. They were not re-united until the bees were shaken into their new hive.

THE BROOD WAS NOT SAVED.

On an average there was not to exceed one and one-half frames of brood in each colony, and it all went to the melting tank. Considering only the time required for an additional trip to this yard I could not figure where it would pay me to allow this brood to hatch. The extra fussing necessary—the hunting and caging of queens, and

the probability of virgins hatching in many of them, necessitating more fussing, put it entirely out of the question. Another point considered was that while this brood was hatching, many of the old workers would be dying. They were in their new homes and had healthy, sealed brood before I could have begun moving them, had I awaited the hatching of the brood.

We started with our load about four o'clock a. m. each trip, and drove sixteen miles to Lompac. There we halted one hour for breakfast for ourselves and horses. After breakfast I finished the journey alone each day. Their new location was six miles northwest of town. On the arrival of two of the loads the resident bees gave me such a warm welcome that I had to unload one hundred yards from the apiary and haul the supers in on a wheelbarrow.

By rapid work I managed to take off the supers, combs and honey I needed in the daytime. These I tiered up four high. Tight lids, bottoms and hives are an absolute necessity for this work. I left these bees in the screened supers under shade trees until they began to fall to the bottom. Some died, thus showing that their supply of honey was exhausted. Then they were transferred to their new hives. Water was given them once a day.

THE WORK WAS DONE AT NIGHT.

The first lot hauled was shaken on their new stands in daytime, but the resident bees were so much inclined to rob that I had to discontinue that plan. The newcomers were slow in taking possession and too weak to put up a spirited defense. Thereafter I drove out again each evening and transferred them after the robbers had gone to "roost." I was very careful to see that the bees all got in and that the entrances were constructed to one bee space or larger—according to the strength of the colony.



Home of D. E. Lhommedieu, Colo, Story Co., Iowa.
Note the straw hive in the gable of the house.

After moving them I found several were too weak to pull through. Not caring to give them brood from the healthy stock until I knew the treatment was successful, I joined a few of them. There are now (March 4) forty-five there, and every one of them is entirely free from foul brood.

RENDERING THE OLD COMBS INTO WAX.

After the last of these bees were established in their new homes, I returned to the old location and rendered the wax. For this purpose I used a tank three and one-half feet long, sixteen inches deep and twenty-one inches wide. Filling it about three-fifths full, the combs were tossed into the boiling water.

This tank handles twenty-five combs at a time nicely. In from ten to fifteen minutes (varying somewhat owing to age of combs and intensity of heat) the wax would all be melted. I would then take out the frames, using for this purpose a four-foot stick.

They were kept tiered up neatly, as a bunch of frames like this, if thrown loosely in a pile, soon occupy some space. The water was changed each

day. Frames came from the tank frequently with some wax adhering to them. These were tiered by themselves until next morning, when they were given another hot bath in the clean water and came out practically free of wax.

When hives or lids had adhering wax, they also went into the tank. The cocoons and wax were dipped from the big tank and poured into a sack, the bottom of which was in a galvanized iron receptacle. This arrangement has flaring sides and handles (or ears) like a kitchen steamer. One of these handles rests nicely on the rim of the Root wax press, so there is no danger of slipping and spilling its contents while lifting the sack into the press. With it one man can easily attend the press. There were about 1,200 frames and we secured 500 pounds of wax from them.

DISINFECTING THE HIVES AND FRAMES WITH LYE.

After the wax was melted and out of the way, I removed all traces of disease from the frames. This was done by boiling them in a strong solution of

lye-water. Add lye to the boiling water until all adhering propolis comes off, leaving the wood bright and clean. That is the strength test. But you will need to add lye from time to time to keep it at the right notch. The lye doubtless eats through the spaces, and in combination with boiling water kills all germ life. The hives, lids and bottom-boards were treated in the same manner. It was necessary to invert the hives to get the liquid entirely over the wood.

Let me say in conclusion that this method of treating frames is not an experiment. I have used it successfully for eight years, and the disease has never re-appeared where these frames were used. When inspector of this (Santa Barbara) county in 1905, I used to tier up the hive bodies and char them out with fire, as apiarists here will testify. During the past four years, however, I have practiced boiling them in lye-water also, and while it thoroughly sterilizes the hives it does not leave them like charred-out shells, as the fire

method sometimes did. It loosens the paint but otherwise the hives are good as ever.

Lompac, California, March 4, 1911.

[If I understand the above plan correctly, it is, simmered down, simply shaking the bees from their combs at night, moving them in screened supers to their new location, several miles away, letting these supers of bees stand until in a nearly starving condition, and then hiving them in new hives. Later on, I suppose, combs of brood and honey were given them. At least such a course would be necessary in the northern states. At first thought it seems to me that the above plan would be rather risky for the novice, and yet if proper care is taken I can see no reason why it should not be successful. Mr. Parker's success with the method goes a long way to knock out any arguments to the contrary, for, after all, it is the results which count. There is one feature that especially appeals to me, and that is in disinfecting the hives with lye instead of with fire. Personally I never liked the looks of those charred hive bodies. They always looked too much to me like a standing advertisement saying "We've had foul brood."]

Foster's Comb Honey Scraping and Casing Table.

WESLEY FOSTER

THIS table shown is the result of ten years' experience with many different tables, benches, etc. for use in scraping and casing a honey crop. The supers are opened up on one of the platforms by turning upside down and driving out the follower board. The sections are then easily removed.

These platforms are covered with tin as is also the bottom of the box which holds the scrapings. A worker can stand on each side and both scrape from the same super or each have a super to work from as the platform is large enough to hold two supers. The scraped sections are piled up on the platform at the other side of the

scraping box and from here they are cased by a third party who also carries the supers to the scrapers.

We generally hire women to scrape our honey and the scraping table is made low so that the work may be done in a sitting position. Stools are what we use. I generally do the grading and casing myself and carry the supers to the scrapers, also opening up the supers if the women are not experienced. My experience has been that more honey is injured in opening the super than in scraping the sections. Two strips of sheet iron are nailed on the sides of the scraping box to clean the scraping knives off on. These are shown in the cut. The cleats on the

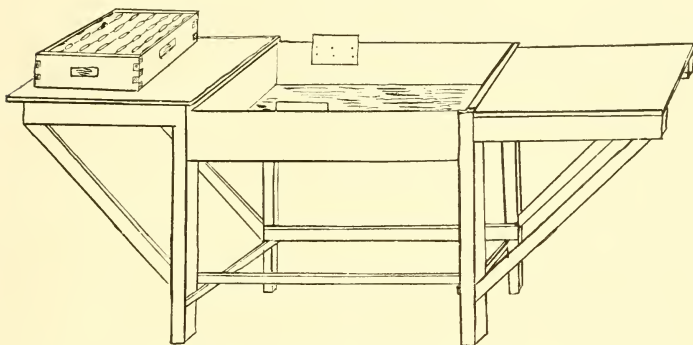
lower ends of the legs are used to lay the separators on when taking them out of the super. We leave them there until the space is filled or till we have time to clean them.

The table is made heavy enough so that one end may be loaded to its capacity without danger of tipping up and this is an important point for there are

times when one may become somewhat careless and if it would tip, the honey would mash on the floor.

For the space occupied it suits our requirements in fine shape as it can be moved quickly and the light made to fall at the right angle for the best grading of the honey.

Boulder, Colo.



Foster's Comb Honey Scraping and Casing Table.

Smoke Pots to Prevent Robbing at the Wagon and Use of Kerosine in the Yard.

O. B. METCALF

I SUPPOSE that many are now taking their extracting combs to the out yards and that later on some will be taking off supers of comb honey to haul in. I wonder how many bee-keepers have had as many run-aways as I have at this work, or how many have put as many yards on the robbing rampage, or had as many fine supers of comb honey partly spoiled by the robbers getting into the supers in the wagon. I used to work early in the morning, late in the afternoon and even at night; getting behind with my sleep, and with the work. Year before

last, however, I so perfected my smoke pot system that I can haul honey to or from an out-yard at any time with little trouble from the robbers. Here is the system:

Take three or four old five-gallon cans, cut the tops out of them on three sides so as to leave them for a flap lid, and punch in one side of them near the bottom a one-inch hole, and your smoke pots are made. Take these with you, filled with chaff or any other substance which will smoulder along making a good smoke. When you get to the out-yard empty about half out of each, and

light what remains at the one inch hole near the bottom. Hang these about the wagon so the wind will blow the smoke across the wagon. If there is quite a wind you may turn the airholes away from the wind or you may stuff the top of the smoke pots full of green weeds or grass and get such a smoke as you never saw before. Do this before the robbers start. You cannot get up enough smoke to stop robbing, but if enough smoke is mixed with the scent of the honey the bees will not locate the honey. I had always used two wagon sheets with a load of honey or empty combs, and I use one still, for it helps to keep the odor from the honey smothered in and will also baffle the robbers if well tucked in.

THE BEE THAT PLAYS TAG WITH YOUR HORSE'S EAR.

If there is a bad dearth on while you are taking off honey or putting combs on, some mad bees will follow you to the wagon, and if your horses are as notional about having the bees play tag with their ears as mine are these bees will not let you hitch up. Have you ever slipped off behind the bushes, fought mad bees for fifteen minutes when it was already late, and then sneaked out to hitch up only to have one or two of these mad bees find you at the last moment and send the horses flying off home with the harness and neck-yoke, while you trudged along behind, orating in a particular style that would not do for print? If you have you will sure appreciate the plan I am about to give you for killing those mad bees that follow the wagon. Tie a wisp of burlap to the end of a small stick. (If you have some old pieces lying about that have been used under the covers and are all gummed up, they are just the thing. If not, saturate the new burlap with kerosene). Set this torch afire and wave it about over your head. You will in less time than it takes to tell it have the enemy

hopping about at your feet with trimmed wings. Keep this torch handy while you hitch up and if another comes bothering about, pick it up and trim his wings. If, while you are working in the yard, a few mad bees persist in bothering you, just take the smoker burlap out of your smoker on the end of a stick and these bees will promptly fly at the dark object and put their wings out of commission. The credit of this discovery of burning the wings of mad bees in this company belongs not to me but to my partner, H. L. Parks.

USES COAL OIL IN THE APIARY.

A great deal has been said about the use of carbolic acid in the bee yard, and no doubt something about the use of coal oil in a similar way, but I believe that not one beekeeper in a hundred knows the real value of coal oil in the bee yard. If you are burring your combs or inspecting for foul brood during a dearth, as you sometimes have to, I venture to say that the proper use of coal oil will keep down robbing at least 90 per cent. Saturate a rag as large as a napkin with coal oil and hang it in a large can and use this can to collect burs or uncappings in, and no robbers will bother them. In inspecting for foul brood or looking for queens or any such work, lay the coal oil rag on the tops of the frames so the wind will float the odor from it across the hive. If possible keep the frame you have out in the line of the odor from the coal oil rag or in the can with it. Do not believe anything you may have read as to the odor of coal oil making bees mad. I have used it in the smoker instead of smoke and it puts them in a good humor so far as I can see.

Merilla Park, N. M.

[Anyone who has ever had to do with out-apiaries will appreciate the above article. It smacks of experience c'ear through. Haven't you ever thought

naughty things when that persistent little fellow tried to get up your nostril? And haven't you and the horse done a cake-walk when it tried to find a bee cave in the horse's ear? And

haven't you sometimes beat an ignoble retreat that you would hate to own up to in a bee convention? Be honest now, of course you have. And the remedy so simple. Why didn't we think of it?

Improvement in Bees by Selection in Breeding.

J. E. HAND

PERHAPS no branch of bee-keeping offers a greater inducement to the bee-keeper than the improvement of stock by careful selection, and judicious breeding along chosen lines. It is thus that we may establish and perpetuate inherent tendencies of a highly desirable character; for example, we discover that a certain colony has developed unusual qualities along some particular line, it may be that the bees of a certain colony are gentler than any others in the apiary; or perhaps some colony has far outstripped all the rest in honey-gathering qualities, cap their honey whiter, are better comb builders, or less inclined to gather propolis, etc., all of which are traits that it is very desirable to perpetuate, and for which the wide awake queen breeder is ever on the lookout, for it is only by selection and breeding from such sports as these that we can hope to develop an improved strain of bees.

When such a colony is discovered it should be marked for further observation and closer inspection, and if these desirable traits continue under adverse conditions that queen is used as a breeder of drones as well as queens. No one should fear for the consequences of in-breeding, for it is only by a judicious system of in-breeding along chosen lines that very much has ever yet been accomplished by way of establishing fixed characteristics, whether in bees or other kinds of animals. The difficulties surrounding the mating of queens have been greatly magnified and is by

no means an insurmountable obstacle; it is true that we cannot mate our queens with the same degree of certainty that surrounds the mating of other animals, and yet the queen breeder who is so fortunate as to be isolated far enough from other bees, to enable him to control the drones within a radius of three miles, can mate his queens with drones of his own rearing with sufficient accuracy to enable him to establish fixed traits, such as uniformity of marking as well as inherent habits, all of which are indications of well bred stock.

THE BEST METHOD FOR IMPROVING BEES.

Many bee-keepers have erroneous ideas concerning the best method of improving bees; for example, not long since, a correspondent asked the opinion of the writer concerning a plan that he had in view for the development of an improved strain of bees. If I remember correctly the idea was to purchase virgin queens from several of the most noted queen breeders and mate them with drones of various other noted strains. His estimate of the cost of the project was \$1,500. My reply was to the effect that while it would seem at first sight like a very good plan, a closer scrutiny reveals the humiliating fact that after we have parted company with our cash, about all we will have to show for our time and money invested, will be a mixed conglomeration of different strains of bees, and that it would require the best part of a lifetime of selection and breeding to enable him

to develop a strain of bees with as uniform characteristics as can be procured from any reliable queen breeder at a nominal cost. Let no man delude himself with the idea that he can establish uniform traits by miscellaneous selection and cross breeding.

CAN THE SWARMING INSTINCT BE ELIMINATED?

Concerning the elimination of the swarming instinct of bees by selection in breeding, that is quite a different proposition; it is one thing to develop, and establish by selection in breeding, traits that already exist by nature, and quite another thing to eliminate an instinct that is a part of the very nature of bees, and from which no man can separate them. The laws that govern the instinct of animals are as fixed and immutable as the universe and must so remain to the end of time. It is claimed that when man learned to hatch eggs by artificial methods he was soon able to develop non-sitting strains of fowls. However such erroneous ideas as these usually emanate from those whose knowledge of poultry is very limited. We hear a great deal about non-swarming strains of bees and non-sitting strains of fowls, but who can truthfully say that he ever saw a specimen of either? The truth of the matter is that there never was such a thing as a non-swarming strain of bees and it is safe to assume that there never will be. It is claimed that the leghorn fowl by reason of selection in breeding for many years have finally become non-sitters, but the real facts in the case

are that leghorns are no more non-sitters today than when they were first taken from their native jungles hundreds of years ago.

After all, what would we gain by breeding out an impulse that is the fountain head of the energy and existence of bees. Without the swarming instinct of bees they would be of little value. The same all wise Creator who gave to man all the lower animals, endowing them with instinct only, endowed man with reason, that he might have dominion over them, not by brute force and cruelty, nor yet by robbing them of a vital part of their very nature and means of existence, but by kindness and gentleness, through the wonder working power of reason over instinct. It is this power when properly applied, that will give us absolute and complete control of the swarming instinct of bees. Right here the question arises, which do we need most, improved bees, or improved methods, and improved bee-keepers?

Birmingham, Ohio.

[Since taking hold of the REVIEW, it has been my pleasure to read a considerable quantity of manuscript with reference to queen rearing, and the improvement of stock, and one point that I notice practically all experienced writers seem to agree on, and one which would be easily overlooked by the inexperienced, is that great care must be taken in the introduction of new blood into the apiary. If one has a good strain of bees, while new blood should be introduced occasionally, yet care must be taken to have it possess the *same characteristics* as the strain you are developing. This is an important point and is emphasized in the above article.]

Most Bee Keepers Do Not Have Enough To Do.

GEO. S. DEMUTH

IN the November REVIEW, Mr. Facey tells about a bee-keeper who neglected his 300 colonies of bees while selling his honey, thereby losing

much more than the gain in the better price for the honey.

I do not mean to criticize Mr. Facey, though perhaps he sees the matter

through the eyes of a dealer, and not exactly as it is. I do feel sure, however, that the trouble with that 300 colony man, was not too much work but rather *not enough*. If he does not operate more than 300 colonies, he *should by all means do something else*. He should be so busy that he will feel that he is neglecting his bees—then they will be well cared for. It is the man who has idle moments who puts things off until a more convenient time, not the busy man. For instance, I have been operating three yards (200 to 250 colonies) all of them outyards, for comb honey, and am on the road for the State eleven months of the year, yet the bees are better cared for than when I was teaching school but nine months of the year. You know when a fellow has to do a thing in a certain length of time he will work out a system and invent short cuts that will do wonders.

I wanted to say these things to you because this doctrine of the minimum of labor for a given number of colonies is really a part of your doctrine of

"Keep more bees." In my work among bee-keepers I see so much misdirected and ineffectual work, and have noted that the busy man is the one who does things.

I know of course that in my case I could make more money by keeping more bees and dropping the other work, and hope to do so as fast as I can, but there are a whole lot of us two and three hundred colony fellows who at present at least find it convenient to be tied to something else.

To such I would say, "Keep more bees," but if you don't, do something else most of the year, and do it hard.

Peru, Indiana, Nov. 21st, 1910.

[I am heartily in accord with the above article. It rings true from beginning to end. If a good many of us who think we are so busy, would stop and take an inventory of *what we really do do*, I am afraid we would be surprised at the small amount really accomplished. System in our work means everything, and it applies to bee keeping as well as any other business. "I am too busy" too often means, "I haven't the inclination, or ambition."]



EDITORIAL

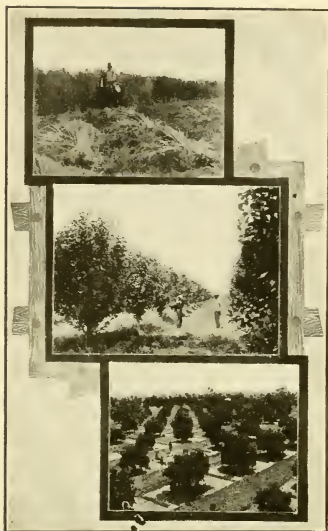
"The reason most of us do not accomplish more is because we do not attempt more."

"Every farmer boy wants to be a school teacher, every school teacher hopes to be an editor, every editor would like to be a banker, every banker would like to be a trust magnate, and every trust magnate hopes some day to own a farm and have chickens and cows and pigs and horses to look after. We end where we begin."

A New Paradise for Bee-Keepers.

The frontispiece for this month's REVIEW shows an apiary on the Ivy ranch, near Phoenix, Arizona. This is in the famous Salt River Valley, where the completion of the Roosevelt Dam last spring made thousands of additional acres available for farm use.

This immense dam, requiring over four years' work, and costing in the neighborhood of \$3,500,000, is 280 feet high. The lands below the dam which will be irrigated by its waters will make 25,000 farms.



Oats. Pear Orchard. and Orange Grove in the Salt River Valley.—See Editorial.

Bulletin No. 4, published by the Phoenix and Maricopa County Board of Trade, says this about bee-keeping in the Salt River Valley:

"Bee-keeping is one of the most profitable of industries of the Salt River Valley. The honey crop for the usual season will exceed 750,000 pounds, netting the producer about five cents per pound on board the cars. The produce usually is marketed in Chicago, through two associations of bee-keepers. The honey, mainly drawn from mesquite and alfalfa blooms, is of good quality, and is principally sold for confectioners' and bakers' uses. About 10,000 hives are maintained in the valley. The average of 75 pounds of extracted honey to the colony is often exceeded, 200 pounds being no unusual amount in good seasons. The bees generally are of the yellow Italian variety. The country is so well adapted for the production of honey that every suitable

place in the mountains to the north appears to have been pre-empted by colonies of bees that have escaped from the apiaries of the valley, the busy insects doing well their part toward making the land one that shall 'flow with milk and honey.'"

There are, no doubt, a good many available locations for bee-keeping, that are at present unoccupied. However, no one should sell out and go there without making investigations, first by letter, and second by a personal visit.

To Contributors.

Just because you don't happen to agree with the editor is no reason why you should not send in your contribution. The REVIEW editor likes a fighter, providing he is a clean fighter. If your position isn't worth defending, it isn't worth holding. The pages of the REVIEW are open to all good, clean, helpful contributions, whether we agree with them or not. More than that, I am willing to pay for all I can use.

Right here I want to say that I would like good, bright illustrations, or photographs. If you need a photo to properly illustrate your article, get the picture taken, and send along your bill with the article. If I can use the article I will gladly pay extra for the pictures.

Honey Conditions.

Bee-keepers will do well to think twice before they sell their honey at a low price this year. Buyers are scouring Michigan, picking up all they can get. I am just receiving reports from members of the Michigan Bee Keepers' Association, and it is surprising how many have no honey at all for sale. The crop in this state is much shorter than it was last year, and last year was a short crop. Prices should rule higher than a year ago—in fact, some buyers, at least, are offering more right on the start.

Reports from other states do not show a very encouraging aspect, so far as

white honey is concerned. What may develop from the fall flow is yet to be seen.

Don't hold your honey. Ask a good price, and then hustle to sell. Prices nearly always tumble near the holidays. Buyers now want your honey, and now is the time to sell. Josh Billings says, "The time to set a hen is when the hen wants to set."

Thank You!

You don't know how I appreciate the many kind and encouraging letters which I have received since mailing the June-July issue of the REVIEW. Letters have come not only from my acquaintances and friends, but from entire strangers. Those letters rang true, and showed an honest appreciation of my efforts in getting out the June-July issue.

The attitude of the *American Bee Journal* and *Gleanings in Bee Culture* is also highly commendable. Both have given me every encouragement, and have stood ready to assist in every way possible. Not only have they given me

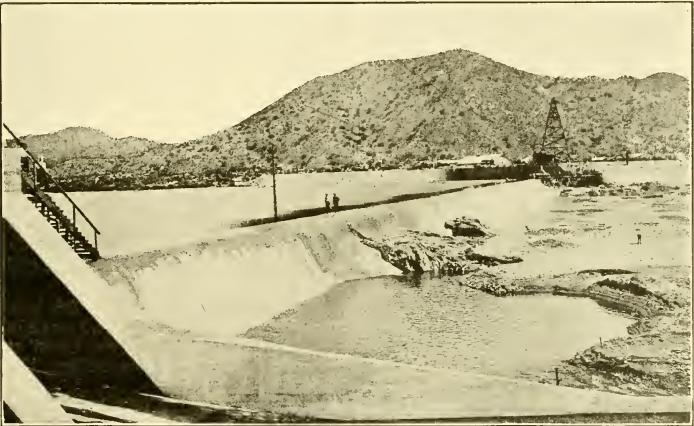
liberal press notices, but their private letters have been full of good words.

The subscribers, too, are responding nicely with renewals. This brings help of a financial nature at a time when it is most needed. With these remittances is often an encouraging word. All of this tends to spur me on to do my best, and I trust I may be able to fulfill your highest expectations. Again I say, thank you!

Price Cutting.

One of the prominent symptoms of poor salesmanship is "price cutting." It is generally the first thing the inexperienced salesman does to meet competition, or spur sales. It is the last thing he should do.

Sheldon says, "Salesmanship is the power to persuade people to purchase at a profit that which you have for sale." It doesn't mean to sell below cost. It doesn't mean that your selling point should be "price" at all. It does mean that you should *sell the quality of your goods*.



The Famous Roosevelt Dam, Salt River Valley.—See Editorial.

What do you do, Mr. Bee-keeper, when your competitor lowers his price on honey? Do you go and do likewise? Do you get mad? Do you insult your prospective buyer by telling him "*to go and buy of the other fellow, then?*" Or do you do like our good friend, M. M. Baldrige, of St. Charles, Ill., who, when his customers tell him that they can buy honey in the stores at a price way below what he is asking, replies quietly, "Well, possibly that is all that honey is worth." Do you see the point? Mr. Baldrige sells on *quality*. He keeps his customer thinking about the quality, and not the price. People will pay for quality, if you can convince them that you have it. When Mr. Baldrige says, "Possibly that is all it is worth," he raises a question in his customer's mind regarding the quality of the low-priced honey.

What are you selling, anyway, Mr. Bee-keeper, price or honey? Then talk honey, not price. If you have a good article, and can't sell it at a profit, you're not a salesman.

Michigan Loses Another Prominent Bee-Keeper.

Word is just received of the death of Hon. Geo. E. Hilton, Fremont, Mich. Mr. Hilton had been sick for some time, and just before his death he went to Chicago to consult a specialist, who told him to return home at once. While I have not had particulars, I understand he died the same day he arrived home.

Mr. Hilton had been prominent in bee-keeping for years. He was always an active member at the state conventions, and last spring, although ill at the time, was a tireless worker in the interests of the foul brood law, which passed both houses, but failed to get the Governor's signature.

He was also a prominent member of the National Bee-Keepers' Association, holding at one time the office of President. He will be missed from both

Associations, as well as from the bee-keeping fraternity in general.

Our sympathy goes out to the bereaved family.

You'll Appreciate This.

There are a good many young men holding salaried positions who would like to go into business for themselves, but are afraid to let go of the "sure thing." While I am not in sympathy with "prize fighting," yet, having left a salaried position to take up the work of publishing the REVIEW, I couldn't help but appreciate the following clipping, sent me by my sister:

James J. Corbett found one of his friends in the throes of thought the other day. The friend was contemplating giving up a fat salaried position to take an independent chance. Whenever he thought of the profits ahead if he made good as a business man, he glowed like an oil lamp. Whenever he thought of resigning that sure envelope at the end of the week he became solid ice to the midriff.

"When I first began boxing in California," said Corbett, "my father used to lecture me. 'Stick to the job in the bank, Jimmie, b'y,' said he. 'It's the fine salary you do be getting there, and as long as you live you can kape that fine job at the desk. Remember, 'a rolling stone gathers no moss.'"

"But I kept on fighting," Corbett said. "And father kept on panning me. Finally I fought with John L. Sullivan, and you know what happened. When I got home I carelessly peeled a thousand dollar bill off a roll as big as a cabbage and tossed it over to dad.

"'Just a little pipe money for you, father,' I said. 'Part of what I made in my last fight.' Father's grin began at the corners and kept on expanding. His eyes twinkled.

"'Ah, Jimmie, b'y,' said he, 'it's the roving bee that gets the honey.'"*Cincinnati Times-Star.*

NATIONAL PROGRAM.

There will undoubtedly be reception committees who will meet all incoming trains the forenoon of August 30th. Hotel information can be secured from them. Those arriving in the afternoon will go direct to the convention room.

PLACE OF MEETING.

G. A. R. Hall, Court House, Minneapolis, Minn.

TIME.

August 30th and 31st, 1911.

SESSIONS.

1st—Foul Brood—1:30 P. M., August 30th.

2nd—Honey Selling—7:00 P. M., August 30th.

3rd—Business—8:30 A. M., August 31.

4th—Miscellaneous—1:30 P. M., August 31.

5th—Co-Operation—7:00 P. M., August 31.

6th—Free trolley ride around the city, courtesy of Minneapolis Commercial Club, 9:00 A. M., Sept. 1st.

HOTELS.

Radisson	.....\$1.50 per day and upward
Dyckman	..... 1.50 per day and upward
West	..... 1.00 per day and upward
Nicollet	..... 1.00 per day and upward
Vendome	..... 1.00 per day and upward
Rogers	..... 1.00 per day and upward
Camfield	..... 1.00 per day and upward
Majestic	..... .75 per day and upward
Golden West...	.75 per day and upward
Beaufort	..... .75 per day and upward
Pauly	..... .75 per day and upward
Russell	..... .75 per day and upward

PROGRAM IN DETAIL.

Foul Brood Session, begins at 1:30 P. M., Aug. 30th, and is subdivided into the following topics:

1st—The present status of the campaign against foul brood.

2nd—Advantage of apiary inspection under the supervision of the State Entomologist.

3rd—How can a national campaign be conducted against foul brood?

4th—How to get state foul brood laws.

5th—The agricultural college and inspection.

6th—Curing foul brood. Inspector's methods—what are they?

7th—Appointment of committees.

8th—Question box.

Honey Selling Session begins at 7:00 P. M., Aug. 30th, and is subdivided into the following topics:

1st—Is a national advertising campaign for selling honey practical?

2nd—How can a national campaign be conducted for developing the wholesale honey markets?

3rd—A mail order honey trade—how conducted.

4th—Developing the home markets.

5th—What sized package should be used for the retail trade?

6th—Question box.

Business Session begins at 8:30 A. M., Aug. 31st, and is subdivided into the following topics:

1st—President's address.

2nd—General manager's report.

3rd—Secretary's report.

4th—Shall the National be one separate association, or an aggregation of smaller ones?

5th—The new constitution and by-laws.

6th—Publication of annual convention report. Is any change desirable?

7th—National Association bulletins; what they have accomplished.

8th—Nomination of officers.

Miscellaneous Session begins at 1:30 P. M., Aug. 31st, and is subdivided into the following topics:

1st—Mating stations conducted by the government. Would they be practical?

2nd—Uncapping melters. Are they being used extensively?

3rd—Steam heated uncapping knives. Are they practical?

4th—Uncapping machines. Are they as yet a success?

5th—Adulteration of honey. To what extent is it being practiced? What can be done to stop it?

6th—Uniform shipping cases. If adopted what size should they be? Why?

7th—Question box.

Co-operation Session begins at 7:00 P. M., Aug. 31st, and is subdivided into the following topics:

1st—What the Colorado Honey Producers' Association is doing.

2nd—Co-operative efforts in California.

3rd—The Michigan plan, or what the Michigan Association is doing.

4th—What can the National do along co-operative lines?

5th—Obstacles to be met with in co-operative efforts, and how to overcome them.

6th—Question box.

You will notice that in the above program the names of those to take part

are not given. There is a two-fold object in this. First, we want the persons who are to lead in the handling of the topics to be present. Second, we want every member to come prepared to take part in the discussions, as we want this to be a convention of live members, and not have the majority sit still while a few do the talking. Remember, *you* may be called on to take part.

In conclusion, let me say that there will be some competent person there to handle each one of the above subjects. Prominent bee-keepers from all over the country will be there, and these topics will be assigned to some of them before the session starts. But it is expected that every member will plan to take part.

E. B. TYRRELL, *Secretary*.

SELECTED ARTICLES

AND EDITORIAL COMMENTS

Working Comb Foundation.

J. J. Wilder says in July *American Bee Journal*, that working comb foundation in the south during extremely warm weather is very difficult, and gives the following plan:

"It is very difficult for bees to work comb foundation at this time of the year, owing to the high temperature which makes it very flimsy. This can be overcome by dipping it in cool water as it is used, and shaking the water off."

Excessive Use of Smoke on Bees.

In the same issue, Mr. Wilder further states, under the above heading:

"I have often seen bee-keepers smoke their bees so severely while manipulating frames that the greater part of

the bees would boil out at the entrance and cluster under the alighting board, or around on the sides of the hives, and there remain for several hours before they would all go back into the hive, and from thence to the field, and the general work under full headway again. And this they do, seemingly, not aware of the fact that they have given the bees a great back-set in their work. This is, indeed, poor policy at a time when there is no nectar to be gathered, and, when there is, it is done at the expense of the honey crop. If the nights are cool the bees will not stir much in the early part of the morning, or late in the afternoon; then if they are thus molested or hindered during the warm hours of the day, for several days during a

honey flow, it will mean considerable loss. I would rather use smoke moderately, and endure a few stings, than to sustain the loss."

A National Foul Brood Law.

W. C. Morris makes a strong plea for a national foul brood law in July *American Bee Journal*. He believes such a law should have incorporated in it the following:

"No bees should be allowed to be moved from one state to another without inspection.—All queen-breeders should have a clean bill of health from the State or National government.—No honey from a diseased colony should be allowed to be sold.—No Cuban honey should be allowed to come into this country, as the whole of Cuba is rotten with foul brood. This also applies to any other foreign country where there is foul brood.—Bees should not be allowed to be kept in box hives."

He further states that: "In Jamaica, B. W. I., you can not bring a bee into the island; and queens are changed to new cages by the bee inspector, and the bees and cage burned in the furnace of the ship they came over in."

Two reasons given for not allowing diseased honey to be sold are: "First, foul brood is a filthy disease, and filth and clean honey are not possible. Second, my neighbor, Mrs. Smith, goes to her grocer and buys a bottle of honey, put up by Solomon Isaacs, of New York city, who has bought some diseased New Jersey honey, or some cheap diseased Cuban honey at 5 cents a pound. Mrs. Smith uses all the honey that will run out of the bottle, then throws the unwashed bottle in the ash barrel. Five minutes later my bees are cleaning the bottle out. Result: foul brood."

Here is something for the members of the National Bee Keepers' Association to think over.

Entrance Ventilation During Winter.

It seems a little early to speak of entrance ventilation during winter, and yet that problem will be confronting us in a short time.

Mr. S. D. House brings up a new point in *Gleanings in Bee Culture*, that sounds plausible. It is a little thing, apt to be overlooked, and more important because of that, for it is the little things we are more apt to stumble on.

The point is, that ventilation should not be given at the center of the entrance. He gives as his reason that bees form their winter cluster *next to the opening*, and where this opening is in the center, the cluster is formed on the central frames, with bad results. Here is, in part, what he says:

"If we observe the condition and position of bees clustered for their winter sleep out of doors, we shall always find them clustered close to the open entrance at the beginning of winter, and that they will not abandon that position except to follow up their stores. If we close the entrance three-fourths its length on one side, say the first of November, the bees will cluster at the side of the hive where the entrance is open. Usually bee-keepers close the entrance from the two sides, leaving the opening at the center. As the bees will cluster at the open entrance, or in the center of the hive, they will, before the winter is over, consume the honey in those center combs. They are now compelled to move over to one side or the other, and, later, consume all the honey on that side of the hive. As a consequence starvation often takes place, the temperature being too low for the bees to move over several empty combs to get to their honey on the opposite side of their hive. If, on the other hand, the entrance had been placed at one or both corners of the hive, such a condition would not exist.

"If the location is one that is exposed to much wind, and a contracted entrance is desired, it should be closed in the center, leaving an opening at each front corner. This serves a double purpose. First, the bees will cluster at one or the other side of the hive, and, of course, will be in a position to follow up and reach *all* of the stores in the hive. Many times in my early experience I have found colonies in early spring, after starting brood-rearing, out of honey in or near the winter nest. Such a move takes place at a time when the bees can ill afford to stand such a loss, and many times it puts the colony out of commission for the white-honey flow to follow.

"Second, a double entrance (one on each side) gives a much greater ventilation, by causing a circulation of air through the hive, than if the same space was given in one opening in the center."

Low Honey Prices—Who Is to Blame?

In July *American Bee Journal*, Louis H. Scholl discourses at length on this question, and his conclusions are that the producer himself is the one most to blame. Mr. Scholl says:

"Since we have studied this matter for many years, we know whereof we speak. Every year we have quoted our prices, which are generally higher than most of the other producers, and it was no trouble at all to be flooded with more orders than we could fill. This must show, conclusively, if anything at all, that the higher price was satisfactory as far as the market was concerned. But there has not been a single year in which we did not hear from some of our customers that other bee-keepers were offering their honey at from one-half to a cent per pound lower than our prices, and that they did not understand why it was, except that there must be an overproduction

of honey. In many cases we have been asked to meet this lower price, but when we have such a large demand as we have had for the last few years, we do not deem it advisable to lower our prices, and the result has been that our customers buy our honey just the same, stating that in doing so they know just what they are going to get.

"However, it is to be regretted that the blame for the low prices of honey rests with the bee-keepers themselves, and it is hoped that the time is not far off when each and every one of them will make a stronger effort in the direction of aiding in raising the price of honey just so much, and we are confident, beyond the least doubt, that the result would soon show."

We must not be too hard on our brother bee-keeper who gets a lower price for his honey than we do. Often he is not to blame. A good many times he doesn't know what the price should be, but more often it is because he is not a salesman. A good salesman can always get more for the same article than can a poor salesman.

But, as Mr. Scholl says, there is not enough "getting together" along this line. The time is coming when the different state associations will advise their members regarding market conditions.

Making Our Goods Correspond With Our Advertising.

Under this heading, Editor Root in an editorial, July 15th, *Gleanings in Bee Culture*, comments on an article in the same issue by Mr. J. E. Taylor, Belding, Mich. Both Mr. Root and Mr. Taylor believe that the phrase, "golden-all-over Italians," should not be used by advertisers, for the reason that the statement is misleading. The same applies to the "long-tongued bees" advertised so extensively a few years ago. A queen-breeder may have a breeding queen that comes up to the

claim advertised, but her daughters are very apt not to be able to show the same characteristics. Along this line Mr. Root says, "It is almost impossible for a queen-rearer to duplicate the characteristics of his breeding queen. The fact that Nature has designed that there shall be promiscuous mating among the drones, explains how sports showing "extra yellow" or "long tongues" revert back to normal in spite of us. It was for that reason, several years ago, we discontinued advertising long-tongued bees. When we lost the old original long-tongued breeding queen we found that her daughters were not quite equal to the mother, and her grand-daughters showed a still greater departure, until the great-granddaughters went back to the original type. If we could control the male parentage a little better we might be able to produce golden-all-over Italians and five-banders that would be true to name, and not bees that show a sprinkling of three, four and five banders."

Henry M. Basford, in *Printers' Ink*, goes Mr. Root one better. He says that not only must the advertiser's statements be true, but they must appear true to the casual reader. In other words, not even the truth should be always stated, if that truth appears untrue to the one who doesn't know. The very extravagance of a statement will often arouse suspicion. This fact is well understood by a great many experienced specialty salesmen, who, when introducing a new article, will usually state the simple, easily-believable facts first, gradually leading up to the stronger statements later.

Along this line we might question the advisability of arguing with the public about manufactured comb, or adulterated extracted honey. The average consumer believes there is such a thing, and your direct statement to the contrary is apt to arouse suspicion. Why not confine your arguments to con-

vincing him that *your* honey is not manufactured or adulterated, and then you can convince him of the other much easier later. Of course, I don't mean that you should ever *admit* that there is such a thing as manufactured comb honey, but you can keep still when the statement is made, if necessary.

Diagnosing at the Entrance.

In the same issue, Editor Root gives a clear explanation of how they diagnose the condition of a colony by simply looking at the entrance. He says in part as follows:

"But the beginner may ask how we can tell by the flight of the bees whether they need room or not. If we see them streaming in and out like hot shot, and appear to be laden when they come in, and the record on top of the hive shows the colony was given a super a week previously, we conclude it needs more room, and we set an empty super beside it.

"The next hive does not seem to show much activity at the entrance—that is, the bees are not flying much, if any. We pass this. The next colony is doing a little better, but not a great number of bees are flying. We pass this. The next hive shows a stream of bees going in and out. We lay an empty super beside it. The next hive, a powerful colony that was working strongly a week ago, has a lot of bees clustered in front. Bees are going to the field, but in a sort of listless way. Right here we may expect swarming-cells; some Italian colonies, instead of going into the super, will jam honey in the brood-nest. In this case we find the combs are "honey-bound," and very little capped brood and queen-cells in all stages of development. We destroy the cells, uncap the honey, and put into the super a section or two started from some other colony. We smoke the bees at the

entrance, and say, 'You fellows get busy and clean up the dripping honey from your combs.'

"It may be that this work was done too late; but many times it has the effect of starting the bees at work in the super.

"We again begin our rounds of the hives. The next colony shows a roar of bees at the entrance; but the bees are not going in any particular direction—just flying aimlessly around in front. This is a clear case of play-spell on the part of the young bees. We pass this hive for the time being, and so on through the whole apiary. When we get through we have, perhaps, a dozen or so colonies with empty supers along beside them. With smoker in hand, and a hive-tool, we

lift the covers of all colonies in one row at once. We drop the hive-tool and smoker, then proceed to put the supers on, and finally cover each one of the colonies. In some cases we put the super under, and sometimes we put it above the super already on the hive. In the same way we treat other colonies in the other rows.

"We now come back to the colony that was having a play-spell. They have quieted down; but as they do not seem to be flying heavily to the field we pass them. In two or three days we come back and go over the apiary again, spending perhaps an hour in watching the flight of the bees, and opening up here and there a hive to confirm surface indications at the entrance."

WANTED

Comb and Extracted Honey

Let us hear from you with your best price on Comb and Extracted Honey, freight paid to Cincinnati. We buy every time price justifies. No lot too large or too small. We remit day shipment arrives.

THE FRED W. MUTH CO.,

"The Busy Bee Men"

51 Walnut Street

Cincinnati, Ohio

At OUR RISK TRY a Detroit Fireless



RADIANT STYLE—Heat the metal radiators a few minutes only—then imprisoned heat cooks the food.

Cooking in a Detroit Fireless Stove (electric or with radiators) is the most **delicious** way—all flavor and nutriment retained; the most **economical** way—saves 80% of your fuel bill; the most **comfortable** and **convenient** way—saves work over a hot stove—saves constant watching—saves worry. Made in 6 sizes each.

Built Like a Range—Does All a Range Does

"Detroit Fireless Stoves" (both Electric and Radiant) are made from planished steel and aluminum—no wood to warp or split—no stones to break. No felt or pad to absorb steam and odors. They **roast** and **bake** perfectly—rich brown; they **fry** or **boil** perfectly; they steam and stew perfectly. A positive revelation and delight to women. Our perfect **Water-Seal** makes all Detroit Fireless Stoves **steam-tight**.

Free Trial Offer A "Detroit Fireless" will be sent you on 30 days' trial; will pay for itself in the first three months. Write to-day—get our handsome catalog and this new offer.

Detroit Fireless Stove Co.

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DETROIT, MICHIGAN

Advanced Bee Culture

A New Edition

The new edition of **ADVANCED BEE CULTURE** is now ready for delivery.

So many changes have been made that it is almost a new book. Quite a number of chapters have been dropped entire while entire new chapters have been added. Many have been largely rewritten. The most new matter has been added on the management of out-apiaries, and the production and sale of large quantities of extracted honey at an advanced price.

Some of the pictures have been dropped, and many new new ones added.

The number of pages has been kept about the same, but the publishing facilities of the A. I. Root Co. have allowed the price to be reduced to an even \$1.00, postpaid. Review one year and the book for only \$1.90.

E. B. TYRRELL, 230 Woodland Ave. Detroit, Mich.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements. Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER HONEY JARS

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POUDER, Indianapolis, Ind.

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IF you need a nice yellow Italian Queen at once, send to **J. L. FLAJEN, ALMA, MO.** Untested, only 75 cents. Tested, \$1.25. Three-frame nucleus with Queen, \$2.75. Full colony, in 8-frame hive, \$5.50.

ITALIAN BEES and Queens and supplies. Root's standard goods. Ask for circular.

ALISO APIARY, El Toro, Calif.

2-10-11t

WANTED

Early orders for the Old Reliable Bingham Bee Smokers. Address,

T. F. Bingham, Alma Mich.

Italian Queens Nuclei Bees by Pound.

Ten-page descriptive list free. Send for it—you have my address, and I have not yours—before placing your order. Leaflets, "How to Introduce Queens," 15c; also "Increase," 15c; both for 25c. 4-11-tt

E. E. MOTT, GLENWOOD, MICH.

Dittmer's Comb Foundation

Bee Keepers' Supplies

Very reasonable prices on honey-packages for current use gladly furnished. Immediate shipments will be made.

GUS DITTMER COMPANY,
Augusta, Wis.

SHIPPING CASES—HONEY EXTRACTORS.

You want them now and you want them quick. You want quality, quantity and a close price. Our shipping facilities and large stock enable us to supply your wants. Write now to

M. H. HUNT & SON,
LANSING, MICH.



Advantages of BEE ESCAPES

No sweat steals down the cheeks and aching back of the tired bee-keeper, as the result of standing in the hot sun, puffing, blowing, smoking and brushing bees; no time is wasted in these disagreeable operations, and no stings received in resentment of such treatment; the honey is secured free from black or even the taint of smoke; the cappings are not injured by the gnawing of the bees; and robbers stand no show whatever. If there are any burr-combs, they are cleaned up by the bees inside the hive, before the honey is removed. Leading bee-keepers use the PORTER escape, and say that without a trial it is impossible to realize the amount of vexatious, annoying, disagreeable work that it saves. The cost is only 20 cts. each, or \$2.25 per dozen.

R. & E. C. PORTER, Mfrs.

SEND ORDERS TO YOUR DEALER.

EXTRACTOR FOR SALE

At our Northern Michigan apiaries we have three honey extractors. As we don't extract until the honey harvest is over, and at only one apiary at a time, we find it an easy matter to move an extractor from one yard to another, as we go with a double team, and we find that we can easily dispense with at least one of the machines—better have the money put into more bees—so, we offer one of them for sale.

The machine is a four-frame (Langstroth) Root Automatic, reversible, No. 25, with a slip-gear. A new machine now costs \$25.00, but we will sell this for \$20.00, and it has been used only two seasons and is practically a new machine.

MRS. W. Z. HUTCHINSON,
Flint, Mich.

HONEY WANTED.

Choice Clover and Basswood, Comb and Extracted Honey.

WRITE AT ONCE

If you will soon have some honey to ship, and state what you want for it delivered at Detroit, or give price f. o. b. your station. State when you can ship. Address

Care BEE KEEPERS' REVIEW,
Box L. Detroit, Michigan.



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CLEVELAND
BUFFALO
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THE COAST LINE
TO
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**TOLEDO
PT. HURON
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THE LUXURY OF A LAKE TRIP

Where will you spend your summer vacation? Why not enjoy the charms of our Inland Seas, the most pleasant and economical outing in America?

WHERE YOU CAN GO

Daily service is operated between Detroit and Cleveland, Detroit and Buffalo; four trips weekly between Toledo, Detroit, Mackinac Island and way ports; three trips weekly between Toledo, Cleveland and Put-in-Bay.

A Cleveland to Mackinac special steamer will be operated two trips weekly from June 15th to September 10th, stopping only at Detroit every trip and Goderich, Ont., every other trip. **Railroad Tickets Available on Steamers.**

Special Day Trips Between Detroit and Cleveland, During July and August
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Detroit & Cleveland Navigation Company

Colorado Bee-Farm for Sale at Auction

Will sell at public auction, to the highest bidder, on Tuesday, September 12th, my ideal bee farm consisting of 23 acres of good land, set in alfalfa, with good modern house. All equipments for business; 150 to 200 colonies bees in good condition. A honey crop has never failed me and no bee disease.

Located in the sunny Sanlius Valley, Sanford, Colorado. Good home market and three miles from railroad station.

Come out and see the property.

**H. A. JONES,
Sanford, Colorado.**

Let us hear from you, if
you want anything in the

Bee Supply

OR

Poultry Supply Line

Write for our

FREE CATALOGS

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**AMERICAN
BEE JOURNAL** { **3 Months for 10c**

We have on hand some extra copies of the American Bee Journal for January, February and March, 1911, that we would like to put into the hands of those who have never seen or read it. As long as they last, we will mail **3 copies for only 10 cents**. Should you afterward order a year's subscription then the 10 cents may apply on it.

We are offering a year's subscription to the American Bee Journal and a copy of Doolittle's "Scientific Queen-Rearing"—**both for only \$1.00**—the regular subscription price of the Bee Journal alone. Or, if you prefer it instead of the Doolittle book, we will mail you a copy of "The Pearce Method of Bee Keeping." You might send 10 cents first for the three copies referred to, and then, after reading them, send in your order for a year's subscription. We are sure you would be pleased with the American Bee Journal. It is now in its 51st year. Address

GEORGE W. YORK & CO.,
117 North Jefferson Street, Chicago, Ill.

IT PAYS TO USE
DADANT'S FOUNDATION

**A. G. WOODMAN OF GRAND RAPIDS,
AGENT FOR MICHIGAN.**

**DADANT & SONS
HAMILTON, ILLINOIS**

Honey Quotations

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

Fancy—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent, when a shipment sells for as much as one hundred dollars.

BOSTON. Fancy white comb honey, 15c to 16c; No. 1, 14c to 15c; white extracted, 12c; Beeswax, 30c.

July 22.

BLAKE-LEE CO.,
4 Chatham Row.

NEW YORK CITY.—*Comb Honey:* Last year's crop of white is well cleaned up but considerable buckwheat, amber and mixed is still unsold and the demand for these grades is next to nothing. We received some small shipments of new crop white from the South, which finds ready sale at from 13c to 15c lb., according to quality.

Extracted Honey: Demand good. Arrivals are quite heavy from the South and same is selling at from 65c to 90c per gallon, according to quality. No new crop California or nearby on the market as yet. Beeswax quiet at 30c lb.

HILDRETH & SEGELKEN,
82 Murray St.

CHICAGO.—The new honey is beginning to arrive on sale. A little fancy comb has sold at 18c per pound, and judging from the reports that reach this market it will probably command a range of 17c to 18c, beginning with August month. Extracted white ranges from 8c to 9c, according to kind and quality; all white clover (if ripe) brings 9c; amber grades of good flavor bring 8c; less desirable, 7c to 7½c. Beeswax is ruling steady at 31c to 32c for prime grades and sells upon arrival.

R. A. BURNETT & CO.,
199 S. Water St.

July 22.

CINCINNATI.—Comb honey is now coming in and finds ready sale at from 15c to 16c from our store by the single case. Extracted honey, new crop, is also coming in quite lively, and for the finest water white we are getting from 9c to 10c per pound in crates of two 60-lb. cans; amber honey in barrels, from 6c to 7½c, according to the quantity and quality purchased. The above are our selling prices.

For choice bright yellow beeswax we are paying from 28c to 30c a pound, delivered here.

July 17. THE FRED W. MUTH CO.

KANSAS CITY.—There is no comb honey on our market, the crop of 1910 being all cleaned up; receipts of new No. 1 Comb would sell for \$3.50 per case of 24 sections, and No. 2 stock for 25 cents less; amber at \$3.00 to \$3.25. There is some old extracted on the market selling at 8½ to 9 cents for white, amber bringing 7 to 8 cents. Beeswax selling at 25 to 28 cents.

C. C. CLEMONS PRO. CO.,

June 19.

TOLEDO.—There is no new honey being offered as yet, and very little demand for same. New white clover comb honey would bring 16c to 17c per pound in a retail way. There is some demand for extracted honey, but owing to prices asked it will move slow. However, as soon as the berries are gone and the larger producers get their crop ready for market, there will be a better demand and prices will decline somewhat. Beeswax is quiet and brings from 28c to 32c, depending on the grade.

July 17.

S. J. GRIGGS & CO.

Southern Bee-Keepers

When your honey is ready for market write us. Will buy outright or handle on commission. Send samples with full particulars. Are paying 30 cts. per pound, net, f. o. b. New York for choice yellow beeswax.

HILDRETH & SEGELKEN,
265-267 Greenwich Street,
New York, N. Y.

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Shipping Cases

The Best We've Ever Made!

The Best on the Market!

Our 1911 case is supplied with corrugated cushion top and bottom, corrugated pad follower, one piece tops and other superior features. Try them this crop and eliminate breakage to a minimum.

Write for descriptive circular of shipping cases, of queens, and copy of catalog. Address nearest point

Factory, Falconer N. Y. OR 117 N. Jefferson St.
Chicago, Ill.

Root Section Honey Boxes

Concerning the importance of buying the best and our ability to furnish sections of a superior quality to bee keepers everywhere.

OUR SECTION MAKING DEPARTMENT we believe to be the best equipped in the world. We claim superiority of workmanship in several respects, especially in smoothness of the dovetailing and the ends of the sections. They are polished on both sides in double-surface sanding machines, and are therefore uniform in thickness. Too much importance cannot be attached to putting up comb honey in sections of uniform quality and experienced honey producers agree that **ROOT SECTIONS** of either A or B grades are a most essential investment.

PRICE LIST OF SECTIONS

Root Sections come in several standard styles and sizes—with or without bee-way as follows:

4 $\frac{1}{4}$ x4 $\frac{1}{4}$ BEEWAY SECTIONS.

2 in., 1 $\frac{15}{16}$, 1 $\frac{7}{8}$, 1 $\frac{3}{4}$ or 7 to ft. wide.

We send 1 $\frac{7}{8}$ style 2 beeway when your order does not specify style or width wanted.

Quan.	Grade A	Grade B
100	\$ 80	\$ 70
250	1 60	1 40
500	2 75	2 50
1000	5 50	5 00

PLAIN OR NO BEE-WAY SECTIONS.

4 $\frac{1}{4}$ x4 $\frac{1}{4}$ x1 $\frac{1}{2}$, 1 $\frac{5}{8}$, or 1 $\frac{3}{8}$ or 4x5 x1 $\frac{3}{8}$ or 1 $\frac{1}{2}$; or 3 $\frac{5}{8}$ x5x1 $\frac{1}{2}$. We send 4 $\frac{1}{4}$ x1 $\frac{1}{2}$ plain, or what will fit other items in your order, if you do not specify.

Quan.	Grade A	Grade B
100	\$ 80	\$ 70
250	1 60	1 40
500	2 75	2 50
1000	5 25	4 75

One hundred sections weigh about seven pounds.

BETTER ORDER a supply of ROOT'S WEED PROCESS FOUNDATION with your sections. 1910 sales on this superior product totaled nearly 200,000 lbs. Samples with full information and prices may be had upon request.

REMEMBER—We carry complete stocks at this branch and guarantee quick delivery on sections in lots of 100 to 1,000,000 and on foundation and other supplies in any quantity. You ought to know the complete ROOT LINE for every appliance for successful bee keeping. Get the new catalog, brimful of the most modern supplies priced at rock bottom figures for goods of the quality we have manufactured for more than 40 years.

The A. I. Root Company
Medina, Ohio

SEPTEMBER, 1911.



Detroit, Michigan, \$1.00 a Year.

Bee-Keepers' Review

Published Monthly

E. B. TYRRELL, Editor and Publisher
Office—230 Woodland Ave., Detroit,
Mich.

Entered as second-class matter, July 7, 1911, at the post office at Detroit, Michigan, under the Act of March 3, 1879.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Advertising Rates on Application.

National Bee-Keepers' Association

Objects of the Association

To promote and protect the interests of members.

To prevent the adulteration of honey.

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Annual Membership, \$1.00

Send Dues to Treasurer.

BEE KEEPERS

We make the best polished, and have the whitest section. This signifies quality. Get our prices. Prompt shipments. We have a full line of Bee Supplies. Send for catalog.

AUG. LOTZ & CO., Boyd, Wis.

5-11-4t

GOLD MEDALS

St. Louis Exposition 1904.
Jamestown Centennial 1907.



Danzenbaker's Smoker

Shown above in a standing and reclining position. In the latter the grate is under, that it may have a full head of smoke ready on the job at a touch of bellows.

The perpendicular Fire Draft Grate, forcing air Both Ways, makes and Cools the smoke, forming a Double Fire-Wall for Securely riveting the Double-Braced brackets to the cup, that is Firmly Bolted to the valveless bellows by Locked Nuts.

The One-Piece cap Can Not Clog. It is the Coolest, Cleanest, Strongest, Best, and Largest Net Capacity of all Smokers selling at one dollar (\$1.00). We Guarantee Satisfaction or return the price; only three complaints in six years.

Danz. $3\frac{1}{2} \times 7\frac{1}{2}$ inch Prize Smoker, \$1.00; by mail \$1.25. With Bee Keepers' Review, \$1.00 year, and Prize Smoker, \$1.75. Danz $3\frac{1}{2} \times 6$ inch Victor Smoker, 80c; by mail, \$1.00. With Bee Keepers' Review one year, \$1.50.

We send propolis shields with Danzenbaker Hives and Supers, and sell anything in the bee line at factory prices; also select 3-banded Italian Queens and Bees.

Please send the address of yourself and B-friends for free catalogs and prices on Bee Supplies, Bees, Queens, Hives, Supers, Sections and Smokers.

F. DANZENBAKER, Norfolk, Va.
68-70 Woodside Lane.

SWARTHMORE'S PEDIGREED

GOLDENS

Queens from the well known SWARTHMORE Apiaries of the late E. L. Pratt. The brightest *hustlers* and the most gentle pure strain of Goldens in the United States.

The Swarthmore Apiaries, Swarthmore, Pa.

7-11-3t

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of 2 to 4 cents per gallon. Process and right to make it two years, 25c

C. W. Dayton, Chatsworth, Calif.

White Comb Honey

Fancy and No. 1.

We need Large Quantities and
Can Use Yours

American Butter & Cheese Co.

31-33 Griswold St.

Detroit, Mich.

WRITE US

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

MARSHFIELD MFG. CO.
Marshfield, Wis.

Queens of Moore's Strain of Italians

Produce workers that fill the supers, and are not inclined to swarm.

They have won a world wide reputation for *honey-gathering, hardiness, gentleness, etc.*

My queens are all bred from my best *long-tongued, three-banded, red-clover stock* (no other race bred in my apiaries) and the cells are built in strong colonies well supplied with young bees.

Prices: Untested queens, \$1.00 each; six, \$5.00; doz., \$9.00. Select untested, \$1.25 each; six, \$6.00; doz., \$11.00. Select Tested, \$2.00. Extra Select Tested, \$3.00. Safe arrival and satisfaction guaranteed. Descriptive circular free. Address,

J. P. MOORE, Queen Breeder
Morgan, Rt. 1, Ky.

“falcon” Hives and Supplies

**Less 6% in September
and October.**

Six per cent discount for buying six months before actually needed is at the rate of 12% interest per annum. No small saving!

A strong appeal to the large bee-keeper who has many supplies to get ready and does not want to lose any part of his honey crop on account of the delayed order. And this saving on FALCON QUALITY goods which are made to stand the rigor of many years!

Put this down in your note book for every year, but send your list of 1912 wants for quantity quotation today.

**Factory, OR 117 N. Jefferson St.
Falconer N. Y. Chicago, Ill.**

SELL YOUR HONEY TO GRIGGS

WHAT HAVE YOU TO OFFER?

Write me quick. Send sample of your extracted. Tell me how much comb honey you have and how put up for shipment. Will buy for cash or handle on commission.

S. J. GRIGGS,
26 North Erie St. Toledo, O.

WE want to buy white comb and extracted honey in car lots or small shipments. We pay cash on arrival. Mail sample extracted and quote price you expect to get for it. We will mail empty bottles on request.

E. R. PAHL & CO.,
Milwaukee, Wis. Established 1894.

FOR SALE

Empty second-hand 60-lb. cans, as good as new, two cans to a case, at 25c per case.

C. H. W. Weber & Co.
2146-2148 Central Avenue, CINCINNATI, O

Just What You've Been Looking For

Going to attend your state or county fair? Then why not take along a few sample copies of the Review and make some money soliciting subscriptions? Remember, there are hundreds of people keeping bees who know nothing about a bee journal. They will attend your fair. Get their subscription.

Show these people that it is not an expense to take the Review—that it is an investment. Eight pounds of honey at 12½ cents per pound will pay for the Review one year. If it shows them how to get that eight pounds of honey in a year, it has paid for itself. *All over that is clear gain.* Surely they are dull students if they can't increase their honey crop eight pounds in a year by reading the Review.

It is just the journal for beginners, for it tells him just how the big fellows are getting their results. If you was learning a trade wouldn't you rather get next to the fellow who was making a success, than to get in with a lot of other beginners?

Write today for my special “fair” offer for 1911.

The Bee-Keepers' Review

230 Woodland Ave., Detroit, Mich.

At OUR RISK TRY a **Detroit Fireless**



RADIANT STYLE—Heat the metal radiators a few minutes only—then imprisoned heat cooks the food.

Cooking in a Detroit Fireless Stove (electric or with radiators) is the most **delicious** way—all flavor and nutriment retained; the most **economical** way—saves 80% of your fuel bill; the most **comfortable** and **convenient** way—saves work over a hot stove—saves constant watching—saves worry. Made in 6 sizes each.

Built Like a Range—Does All a Range Does

"Detroit Fireless Stoves" (both Electric and Radiant) are made from planished steel and aluminum—no wood to warp or split—no stones to break. No felt or pad to absorb steam and odors. They **roast** and **bake** perfectly—rich brown; they **fry** or **boil** perfectly; they steam and stew perfectly. A positive revelation and delight to women. Our perfect **Water-Seal** makes all Detroit Fireless Stoves **steam-tight**.

Free Trial Offer A "Detroit Fireless" will be sent you on 30 days' trial; will pay for itself in the first three months. Write to-day—get our handsome catalog and this new offer.

Detroit Fireless Stove Co.

120 JEFFERSON AVENUE, DETROIT, MICHIGAN

ANNUAL TRAVEL MAGAZINE

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D. & C. Line, Sent to
You Free.

The latest contribution to the literature of travel is the 250 page book issued by the D. & C. line. It contains three interesting stories and is beautifully illustrated with fine half-tones of scenes along the D. & C. Coast Line to Mackinac. Sent anywhere upon receipt of ten cents to prepay postage.

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ITALIAN QUEENS

Having purchased the bees and queen-rearing business of J. L. Flajen, Alma, Mo., we are prepared to furnish Golden and Leather Colored Italian Queens of superior quality in quantities. Write for prices.

C. E. WALKER MERC. CO.
Kansas City, Mo.

Italian Queens Nuclei Bees by Pound.

Ten-page descriptive list free. Send for it—you have my address, and I have not yours—before placing your order. Leaflets, "How to Introduce Queens," 15c; also "Increase," 15c; both for 25c. 4-11-tt

E. E. MOTT, GLENWOOD, MICH.

FOR SALE

50 Young Italian Queens

(Many tested)

at 75 cts. each, or entire lot for 50 cts. each. 100 (good as new) Heddon hive bodies with frames (of Cypress wood). 250 dovetailed hive bodies with Hoffman frames (second-hand but as good as new). Write for prices. A bargain for some one.

E. T. FLANAGAN & SONS
Belleville, Ills.

BEEES FOR SALE

Fifty colonies bees in 10 frame L. hives, all in good condition. Price on application.

E. H. CANFIELD,
Carson City, - - Michigan

ITALIAN BEES and Queens and supplies. Root's standard goods. Ask for circular.

ALISO APIARY, El Toro, Calif.

2-10-11t

Large quantities of comb and extracted

HONEY WANTED.

Write us for prices, stating quantity and grade.

American Butter & Cheese Co.
612-14 Broadway Cleveland, Ohio

WANTED

Early orders for the Old Reliable Bingham Bee Smokers. Address

T. F. Bingham, Alma Mich.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements, Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER HONEY JARS

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POUDEK, Indianapolis, Ind.

859 Massachusetts Avenue.

Comb Honey Wanted

We are in the market for *fancy comb honey*. Can also use some extracted honey. We will buy it outright or sell it for you on consignment, whichever you prefer.

Write us just what you have to offer, style and weight of package, and your lowest price on any quantity f. o. b. Detroit, Mich.

REFERENCES:

Dunn Mercantile Agency.
Bradstreet Mercantile Agency.
First National Bank.
Editor of this Journal.

F. P. Reynolds & Co.,

Wholesale Fruits & Produce,
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RASPBERRY HONEY

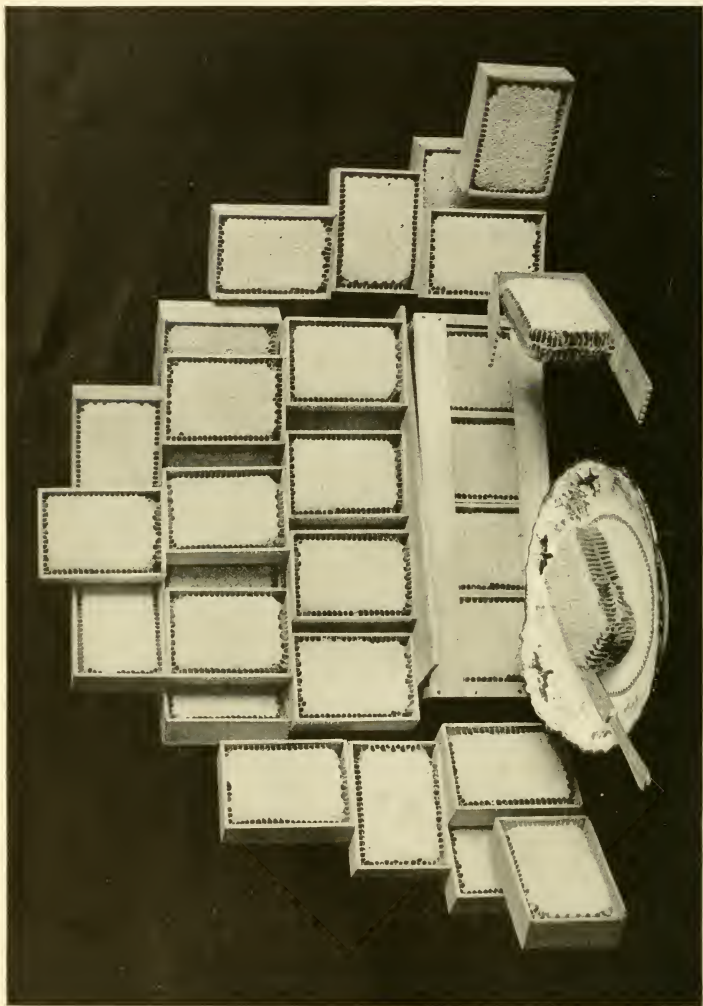
All the readers of the **Review**, who have bought honey of us in the past, need no samples before buying. They always get the same thing, honey of the **very first quality**. It is all left on the hives until it is thoroughly ripened. It is thick, rich, and delicious. Put up in new, 60-lb. tin cans. Price, \$6 per can. Large size sample, 10 cents. The 10 cents may be applied on first order sent. Send all orders to

ELMER HUTCHINSON
Pioneer, Mich.



Are our specialty. Winter your bees in Protection Hives. Liberal early order discounts.

A. G. WOODMAN CO., GRAND RAPIDS, MICH.



Bee-keepers who will produce honey like this have a right to demand a fancy price for the same.

The Bee-Keepers' Review.

A MONTHLY JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS

\$1.00 A Year

E. B. TYRRELL, EDITOR AND PUBLISHER

OFFICE OF PUBLICATION - - - 230 WOODLAND AVENUE

VOL. XXIV.

DETROIT, MICHIGAN, SEPTEMBER 1, 1911.

No. 9.

36,000 Pounds of Honey from 600 Colonies Bees, and Some "Trade Secrets in Selling It."

E. D. TOWNSEND.

TIT is with pleasure that I answer the questions you ask: "What year, or about what year did you make the most money out of bees?" The largest crop we ever produced and the one that netted us the most profit, was the season of 1909. "How many colonies did you have that year?" About 600 Spring count, 700 Fall count.

"Which did you produce, comb or extracted honey?" We produced 33,000 lbs. of extracted and 3,000 lbs. of comb honey that year.

"How and where did you market it and what price was secured?" Our entire crop of extracted honey was put up in 60 lb. net tin cans, two crated together for shipment by freight. There was an exception—about 50 were crated singly and went to our single can customers. Our comb honey in 4x5 plain sections was cased in 20-section, no-drip, shipping cases; six to nine of these cases were recreated in carriers with straw in bottom, provided with handles to carry by. This carrier when ready

for shipment, weighs from 150 lbs. to 200 lbs. and is too heavy and awkward for one to carry, so they are always handled by two railroad men. One of the great secrets of "easy handling" of these carriers, is, one handler will not drop his end of the carrier, for if he did, his "pard" would receive a great "shaking up," consequently, they both set the carrier down at the same time, or nearly so, without a jar. No single case order for shipment is received under any conditions, as I do not know how to pack a *single* case, so it will go through in good shape. Later; we now case all our comb honey in 24 section cases, with corrugated paper bottom and sliding cover.

BEE-KEEPERS GOOD HONEY-BUYERS.

While we do not sell less than a carrier, of several cases of comb honey, on account of not being able to pack so it will reach it's destination in good shape, orders are excepted for single cans or more, of extracted honey. The larger portion of our honey is sold to honey

peddlers, the majority being bee-keepers who have a good retail trade. These bee-keepers after selling out their own production, still have calls for honey and looking through the honey quotations in the bee journals, see quite a margin between these wholesale prices and what their honey sells for readily, are tempted to buy some of this honey at wholesale and sell at retail. It might not be a bad thing to stop here long enough to tell of the methods pursued by the most successful.

Extracted honey in glass, or small packages, sells from the grocer at from 20 cents to 30 cents per pound, and comb honey from 20 cents to 30 cents per section, in the retail way. Of course there are exceptions to this rule, for in some producing centers, honey sells at retail at extremely low prices. The more successful dealer lives in the location where the honey sells at the higher price and buys in the producing center where the price is low. Now I relate the secret "as they told me." Good white honey is bought of reliable producers; honey of a quality that "tastes like more,"—clover, basswood or raspberry being favorite kinds. This honey is carefully remelted and put in gallon and half-gallon friction top tin pails. The gallon weighing 12 lbs. and the half gallon 6 lb. net. Some use the 5 lb. and 10 lb. size of pail, but the larger package seems to be preferred by the majority. These pails, in fact any tin package needed by bee-keepers can be bought at wholesale from the manufacturers.

CANVASSING FOR ORDERS.

The honey to be sold is not taken with them on their first trip, but a canvass of the territory is made and orders taken for delivery at some future time. If the canvasser is working a manufacturing district, the delivery is made shortly after pay day at the mills. In other locations, perhaps a week or ten days is allowed between the canvassing

trip and the delivery. The object of this period between the taking of the order and the delivery, is so that the good housewife may have an opportunity to save up the money to pay for it. One "secret of the trade," is to sarry the sample of the honey in the largest pail one has for sale and say nothing about having honey for sale in any smaller package than the one shown, until it is known that the larger package cannot be sold, then, as a "last chance" offer the smaller package.

I am now ready to tell the main secret of success, of selling honey direct to the consumer, *it is in asking a good fair price, so that big wages* can be made. No one likes to work for nothing, or small wages. I have seen bee-keepers start out to buy and sell honey on a cent or two margin, in the retail way, but they do not stay in the business long, other ways "turn up" where more money can be made and the honey business has to go.

GETTING AS MUCH FOR EXTRACTED AS FOR COMB.

One of the partners of the most successful "sell direct to the consumer" firm, visited us a few years ago, buying Michigan honey for their trade and in the course of his conversation, (it being early in the season) asked my opinion as to how comb honey was going to retail from the grocers that fall. This was one of those seasons of scarcity of good honey and I told him that the prospects were that No. 1 comb honey would retail for not less than 25 cents per section, on the average.

He being a buyer of honey, I could not quite understand the pleased expression that passed over his face at this period. It all became clear though, when he smilingly said "*that's good, we will get 25 cents per pound* for our white extracted honey in 12 lb. pails this year." He then explained that the previous season they sold at 20 cents

per pound, that being the price of comb honey from the grocery store.

These partners sell many tons of extracted honey annually and continue in the business year after year, it's a business proposition with them.

ADVERTIZING IN THE JOURNALS.

But in return. Most honey dealers take some of the bee journals. Taking advantage of this fact we place a small advertisement in some of them, telling in a few words the different kinds of honey we have for sale. Since adopting this method of disposing of our honey crop, a few dollars paid for advertising has always sold our crop, in a wholesale way. We try to be very careful in grading our comb honey to let nothing below the grade being packed, to get in. By practising this careful method of grading and packing, our honey sells for a considerable more than the price quoted in the journals. Our white extracted honey is kept in two grades, that from full, all sealed combs being put in one grade for table use, and that from the unsealed, or part full combs in another, that usually goes to the baker, or to some one who does not care so very much for the quality, so long as he buys cheap.

Soon after the appearance of the honey advertisement, one is likely to get calls for honey and if it is in the extracted form, samples will have to be sent, showing the quality of the honey you have to sell.

When we need mailing cases to send these samples in, we write as follows: "U. S. Mailing Case Co., Boston, Mass. Kindly ship us by express, 100 No. 40 cases, bottles and corks. You will find enclosed \$5.05 to pay for same." If you ask for them, they will send along stickers, to address them on. You had better do this.

As it costs about 4 cents for cases and another 4 cents for postage, by the time a sample is mailed we figure it has cost us 10 cents to send the sample. It

is customary in the sale of goods to give away samples and we have adopted this plan, expecting to sell our honey for enough more money by this method to pay all expenses and leave a margin besides.

SHIPPING WHEN CASH IS NOT SENT.

After a sale is made, the party usually sends along the cash with the order to pay for the honey. It sometimes happens that some one will order without sending the pay. If the party is known to be financially good, we fill the order just the same as if the cash was sent with the order. But we will get orders from unknown parties. Likely they can get all the goods they ask for near home where known, but we do not know about that. Then the order may come from some one who intends to beat you out of the pay, if he can. This later case does not happen very often.

When we receive an order from an unknown party, without reference being furnished, we write him something as follows: (I will omit the address) "Your order for five cases of our very best raspberry extracted honey is received with thanks. As this is your first order, will you kindly send us some reference, the banker, or some business man in your town who knows you. If you had rather, we will ship this honey to our order and draw upon you through some bank of your city, that you may mention, for the amount. We have no doubt in our mind but what you are perfectly responsible for the amount, but have no way of knowing unless you furnish us with references. Hoping you will see our predicament and that no offense is meant, we remain, etc." It is so rare, that a shipment sent C. O. D. is refused, that we now make it a rule to ship to anyone ordering, with no part of the bill paid in advance.

We will suppose you had never shipped a bill of honey C. O. D. (collect on delivery). Take your honey to the depot and ask the agent to make

you out a shipping bill *to your order*, or notify John Smith, Decatur, Ill. (Smith being the man you are shipping too, and Decatur, Ill., being the shipping point.)

Now the honey must be marked the same as the shipping bill, to the order of (your name) Decatur, Ill. Notify John Smith. Now go to your bank and ask them to make out a sight draft on John Smith, Decatur, Ill., this to be attached to the bill of lading the agent will furnish you when shipping the honey. The bank will now forward the bill of lading, draft attached, to the bank John Smith mentioned, at Decatur, Ill. If you have an account at your bank, they will furnish you with what they call customers draft, blanks. In that case you will make out the sight draft yourself and send on with the bill of lading attached, to the bank at Decatur, for collection, thus saving some expense.

In the majority of cases, those buyers who are not known, send the cash with the order. This simplifies matters wonderfully. We like to do business with this kind of customers. Known dealers can be shipped to, if they have a good reputation, in open account.

JOBBERS.

There are buyers in the market who will buy all the honey you have in a lump, delivered, at about a cent a pound less for extracted honey and about two cents less per pound for comb honey, than wholesale price. They call themselves jobbers. They buy your honey and turn right around and sell it in the original package.

I used to sell a considerable honey to this class of dealers, until I learned their "tricks," then I began to think and the thoughts run along these lines: "Why in the world can't I look up these gents' customers and sell direct and save this one or two cents per pound on my honey?" Then there would be

another saving—the freight to the jobbing center, for, the baker or bottler would pay just as much for this honey in car here at producing point, as at some other shipping point. Since then, we have wholesaled our own honey with considerable profit.

About the price: The jobbers tell us that the price quoted in the bee journals is their selling price, not the price paid the producer, the producer being paid the one or two cents per pound less, as mentioned above, less the freight. It ought not be so very hard for any producer to get the price quoted in the bee journals for his honey, at his shipping point, thus the saving of say two cents per pound. This is worth looking after.

During the year of 1909, we sold our best extracted honey for nine cents a pound, in the small way and from 8 cents to 8½ cents in larger quantities, these prices being delivered on car near some of our shipping points. This year, 1910, we sold for 10 cents per pound, in quantities of from one can to ten; 9½ cents in five to ten case lots (two cans in a case); 9 cents in ten or more case lots. We pay no freight in any case.

Now I have a "trade secret" that I have never told before: If we have a larger than usual crop of honey, or, if we decide that *all* of our honey will not sell at the larger price, we do a little figuring and decide about how much we will likely not sell at the higher price. This surplus amount, we will lump to some one at a less price. This year, 1910, we decided we would have 100 cases to job. We found a customer for 70 cases at 8½ cents, on car, which was sold and today, Dec. 31st, we received an order for the last five cans of extracted honey we have. We now know that 70 cases, not 100 was the correct amount to have let go at the lower price, for we like to close out all of our honey during the last of the producing year.

"The next question: "What were the peculiar conditions that enabled you to secure such wonderful results that year?" There was nothing wonderful about the season of 1909. Likely our bees wintered rather better than usual; then we had a fairly good flow of honey from all three of our locations.

ONLY GOOD YIELDS REPORTED.

Here comes in an important point that it would be well to take into consideration in reports of yields. A man with say three yards *in one location* gets a good yield of honey, perhaps 25,000 lbs. We hear of it through the bee journals. Then for a few years we hear nothing from this man. What has happened him? Perhaps his season "went wrong" or something else, at any rate his crop is small, we hear nothing from him until another "bumper" is harvested, then big headlines will appear telling of his wonderful crop. This condition does not transpire with us, for with one-third of our bees in Charlevoix Co. 150 miles north, one-third in Gratiot Co., 60 miles south and

the other third here near Remus, we do not harvest any extremely large crop, neither do we have any failures, for some of the three locations yield fairly well each year, thus an average crop is harvested each season. We like the plan very well.

The last question: "Is there any reason why they may not be repeated in the future? If not, why not?"

It was not any peculiarity of the season of 1909 that caused us to make more out of our bees than at any previous season. All of our locations yielded fairly well, not large large though, but was more particularly on account of the bees being in good shape, to gather the honey when it came. We have learned that it is a very poor location that will not produce paying crops of honey, providing not too many bees are kept in a place. We are paying more and more attention to the number of bees we locate in one place, late years, than ever before. It is important.

Remus, Mich., December 31, 1910.

Honey Prices—Are They Governed by the Law of Supply and Demand?

DR. A. F. BONNEY.

I WAS very much interested reading your comments on "Low Honey Prices," quoting from Mr. Scholl, because I, too, have paid some attention to the matter, and a great deal more to businesses which involved, to me, larger sums than honey ever will, and possibly more than honey does to the vast majority of bee-keepers.

There is but one possible condition which will enable any man to have permanently a plethora of orders for goods at a higher price than his competitors quote, and that is that his rival is out of goods. He may for a time get slight-

ly higher prices than the ruling market as a result of a genial personality, liberal advertising or good salesmanship; however, all things being equal, the everlasting and universal law of supply and demand will adjust prices in spite of all the producers can do to maintain or raise them. This is so palpable a truth that it needs no fortifying, but I shall call attention to the fact that the Standard Oil Company, happily becoming moribund, with, literally, billions of dollars behind it, tried to keep up the price of kerosene in spite of the fact that it had millions of barrels of the

stuff in tanks for which there was no demand, but the time came when they were forced to lower prices 50%, just as honey producers would have to were the supply doubled a few times. The cotton raisers of the South have gravely considered the expediency of burning half the crop to raise prices, while the tobacco producers resorted to stringent methods to keep up prices, and farmers have often tried to combine for their mutual benefit.

SUPPLY AND DEMAND.

The question of supply and demand is so simple a one that I often wonder people can write seriously of altering the law. Mr. Schnoll may gain a little, and I think he does, by cutting out the middle man, but all bee-keepers cannot do this:—from lack of experience, amount of honey to be handled, or other reasons. Mind, I am not in favor of low prices, for I want all the traffic will bear, and have always got a fair price for the little honey I was able to produce. In fact, I have generally got somewhat better prices, because I

am not near enough to another producer to clash with him. When I go out of my own immediate territory to sell, however, I must make my prices to correspond with those existing there, all other things being equal, or else not sell, and I fancy Texas bee-keepers are in a similar position, for I am assured the people of the state consume the honey crop, while Iowa bee-keepers ship much honey to out of state dealers.

A few years ago this part of the country was literally flooded with honey, for clover, basswood, heartsease and wild flowers, as golden rod, bloomed as never before. The result was that Iowa producers shipped largely to foreign markets, and prices ruled low, six cents, I think, being about the minimum for the darker grades. Now with less than 40% of an average crop I am getting, locally, an average of 14 cents for extracted honey, and have no comb at all. I never sold honey for six cents, and never expect to, but six and fourteen is twenty, and the average is ten, a very nice average price for extracted honey.

In the middle west we now have a fine illustration of how prices follow supply and demand. A drought has prevailed all summer, and the potato crop is a practical failure. The result is that we have been paying about a dollar a peck for spuds, though they are but 75 cents as I write. Last year the price was about fifty cents a bushel.

It would be interesting in this connection to ask: What is a Low Price for Honey?

FIRING UP THE SMOKER.

It seems odd that so little a thing as building a fire in a stove six inches high and three wide should produce discussion, but a look at the bee journals will show it does.

The odor of kerosene is so offensive that I do not doubt honey will be tainted with it, at any rate I imagined it injured some for me, and as the sea-



*Eat Bonney
Honey*

One of Dr. Bonney's advertising post cards.
Evidently he believes in original
advertising.



Dr. Bonney's home town, Buck Grove, Iowa.
The home of "bonney honey."

son was wet, and I had difficulty starting a fire quickly I began using denatured alcohol. This burns without odor, is cheap, and I find it very handy.

Buck Grove, Iowa.

But, Dr. Bonney, *is it a question of supply and demand? Isn't it more of a question of proper distribution? Are all honey consumers properly supplied? And isn't it a fact that many honey producers do not get the market price for their honey simply because they don't ask enough?*

A few days ago a honey buyer showed me a nice lot of honey that he had bought at 12½ cents per pound, from a bee-keeper who couldn't afford to take a bee-journal. That honey could have

been sold in a *wholesale* way at 18 cents. What had supply and demand to do with that sale?

No, Doctor, it isn't fair to compare the honey situation with the Standard Oil Co., or even with the market for potatoes. The Standard Oil Co. has a complete selling system, and was undoubtedly giving the market all it would bear. The honey producers have no such system, and there is no question but what the demand can be multiplied many times by proper effort. Potatoes are a perishable product, while honey is not, so naturally the former would fluctuate in price much more than the latter.

This question of marketing is a big one, and will bear our closest attention and study.

A Simple Plan for Disposing of Cappings.

S. A. NIVER.

MR. EDITOR:—What to do with cappings is attracting attention just now in the bee journals, and some very elaborate plans illustrated, but it is a simple matter if you watch out for the main difficulty—

that is, letting them accumulate. I use a modification of the plan outlined on page 188 of July Review.

My uncapping can is a galvanized iron wash tub 20 inches in diameter. When full, I place it in another tub 24 inches

in diameter, with a bucket of water between—and warm the outfit over a two burner oil stove until the honey is quite thin—but never hot enough to melt the wax. Then I mash the honey and wax with a potato masher (made of heavy wire) until the mass is liquid enough to strain.

My strainer is a wooden tray 12 inches deep with bottom of wire cloth, which is just large enough to catch the corners on the wash tub. The honey drains out in a few hours, and is then strained through fine cheese cloth (the 10 cent per yard kind), as all my honey is treated, and let me say right here that *all* extracted honey should be strained through a fine cloth before offered for table use. Dirty honey has done more to injure the sale of extracted honey than unripe honey ever did. More than that, I have to warm honey, as it comes from the extractor it's too thick to run through the fine

cloth without being thinned by heating gently, and there's where my two tubs come handy again.

To go back to the cappings: After the honey is drained out, I dump them into warm water, wash them thoroughly, and put them into a five gallon can which has the top cut out, and place over the oil stove. In a little while I have a nice cake of wax.

This plan does not injure the honey in any way, takes but little time, and costs little for tools, and keeps ahead of the work instead of letting the work get ahead of me.

Oakland, Calif.

[It is a noticeable fact that many of the large bee-keepers use very simple appliances. Whether this is best is undoubtedly open to argument, but I have often thought that if beginners would put more money into *bees* and less into *fixings* that they would be more apt to get the returns that would warrant them in continuing in the business.]

Demonstrating at Fairs and in Retail Stores.

WESLEY FOSTER

BY a greater and more continuous demand there is no doubt but that the price of honey would rise. The real question of marketing our honey is this one of arousing a demand for our product. There are several factors which are very essential in establishing a continued demand for honey. First, a rich flavored, heavy bodied honey should be on sale all of the time. One of the greatest drawbacks to a steady consumption of honey is the substituting of a cheaper grade, when the best grades are all sold. Uniformity of grade and flavor with a supply for the market throughout the year will soon develop a clientele that will continue to grow. These conditions are greatly aided if the number of bee-keepers in a community is large. Then every one sees and hears about the bees

and whether there is a large crop and the general news of the industry, its profitableness, etc. Nearly every one has the idea that bees are very well paying—the idea takes its rise no doubt from the mystery surrounding the hive and the imputed uncommon understanding or genius of the bee man.

There are other factors which limit the eating of honey besides the lack of a supply of honey of uniform grade through the year; the principal of these is the abundance of fruit certain years and the consequent large supply of jams, jellies, preserves and canned fruits which every housewife puts up in these seasons of cheap fruit. The other factor in the smaller consumption of honey is the cheapness of glucose and syrup substitutes. This is very noticeable in times of money stringency

when every one is bent on economy. Much education will need to be carried on to convince the consumers that the cheapest is not always the most economical in the long run.

THE TIME HONEY IS EATEN.

The seasons of the year when honey is eaten should be well understood by the bee man, and the grocers supplied with an extra good supply for these times.

In the fall and early winter comb honey is eaten principally, but with the coming of hot pancake and biscuit weather the use of extracted honey is increased. Around Christmas and for several weeks after little honey is bought, principally because the buying of holiday gifts takes all the money that has been spent on delicacies, and honey is not considered a necessity by people generally.

About February 1st the honey trade picks up again and is better than in the early winter, for the home made preserves are giving out and hot cakes are in demand at every morning meal. The call for honey now continues strong till warm weather comes bringing the fresh fruits and vegetables.

House to house selling of honey cannot be surpassed as a means of popularizing the use of honey, but the method is impossible for many and a shorter and quicker way is necessary for the majority of honey producers.

DEMONSTRATIONS AT FAIRS.

At fairs the people come past your booth and there you can get them to sample the honey, and if the fair management permits, as most do, you can sell a lot of honey right on the grounds. The prizes offered by the fair management will often pay for the expense of exhibiting and you can so get a lot of free advertising. A distinct "brand" for your honey will be a necessity, so the people when they go home will carry distinctly in their minds just what to

call for when they go to the grocer's the next day. The wholesalers should have a stock of your product on hand unless you keep the retailers supplied yourself. There is a great loss of effort, where exhibiting is done at the fairs and then the label on the honey just says, "Pure Honey, put up by John Smith." An easily remembered and striking trade name will go a long way if it is put on an attractive label.

SELL THROUGH WHOLESALE GROCERS.

There is one important point in the method of distribution, and that is the increased confidence and added dignity that comes with the selling through the wholesale grocery houses. Wholesale houses as a rule have a reputation for honesty and integrity in business. Anything that does not prove satisfactory can generally be returned. A retailer feels that if he buys of the wholesaler he has something that will sell, else why would the wholesaler put any of the goods in stock and offer it for sale? The retail grocer feels, and rightly so, that the wholesaler is placing his reputation at stake with every article he offers to the retail trade. If a wholesale salesman offers honey to a grocer, that grocer figures that he will without doubt sell some of it to his competitors, and if his competitors can sell that honey, certainly he can.

THE DISPLAY BOOTH.

The honey display booth should be arranged so as to show the honey off to the very best advantage and also give the best opportunity to give out samples and let every one that wishes to taste the honey, do so. Attendants enough should be on hand to explain the methods of producing honey, its characteristics, flavors and information about bees, for bees are a never ending source of curiosity. Several colonies of bees in observatory hives with all the different appliances used in and about the apiary will be of interest to many.

An exhibit of honey-bearing flowers will be of interest and bees-wax always makes an interesting display.

Motto cards with short, crisp facts about bees and honey will be valuable if they are distinctive and witty. "You'll not get stung if you eat our honey," "A spoonful of honey is the lifework of the bee," "Your sweet tooth is your wisdom tooth if you eat honey," have been used with profit, and show what will arouse interest among the visitors.

For beautiful night effects in the booth, electric lights arranged behind the pillars of comb and extracted honey will be very attractive.

DEMONSTRATIONS IN STORES.

This same method of showing honey and demonstrating at fairs may be profitably followed in many of the larger retail stores where one's honey is kept on sale. It is quite easy to make arrangements to demonstrate in the stores as it helps the store very much to have this aid in selling the honey, and then the store clerks can get so many ideas on selling the honey from watching the demonstrators and talking

with them. Many of the larger stores have a permanent booth in a prominent part of the store for the demonstration of foods, etc. These booths are always kept busy; for the manufacturers of breakfast foods, the flour dealers, tea and coffee importers and roasters are all anxious for the opportunity to let the people sample their goods. The larger houses of this kind, such as H. J. Heinz & Co., Armour & Co., the Van Camp Packing Co., the Quaker Oats people and the host of breakfast food people keep demonstration crews on the road all the time. Most of them sell enough during the demonstration to pay the expenses, so the advertising costs these companies nothing. The goods sold of course come from the stock the retailer has on hand in his store but when he is sold out by the demonstrators, as often happens, more are ordered from the jobber or wholesaler.

If honey demonstrators could be going over the country as these people are, it would not be long till honey would be a hard thing to secure at present prices.

Boulder, Colo.

The Caucasian Bee Ably Defended.

A. D. D. WOOD.

DEAR MR. EDITOR:—I raised my head quickly when I read F. A. Strohschein's article on the Caucasian bees. If he were a bee-keeper along in the seventies he will remember that the Italian bee was railed out against more, yes doubly more than the Caucasian ever was. There were beemen those days who thought the old black bee was the only bee, and where are the blacks today?

Well, I am sorry Mr. S. concluded one swallow makes a summer, for I have many letters of praise for the Caucasian bee and not *one* of com-

plaint. I, too, received queens from the Government and when I had tried them out, I could see there were traits that were desirable, traits that if the Italian bee could inherit they would be the bee.

As to the Caucasian gathering propolis, they are great for that article, and if the colony is not strong they will close the entrance to the needs of their comfort. I notice the hive is one story. That denotes a weak colony. They do this to guard against robbers and keep out the cold. I have had a weak colony that I had on trial to see how much

they could do to close up cracks, fill an inch all around between the body and cover. I drove nails to the corners and set the cover on them and they filled the crevice completely. Any other race would be robbed out.

GOOD HONEY-GATHERERS.

He speaks of their not being up to the standard of honey gathering. Well, my banner hive is the Caucasian—130 lbs. so far this season, and the fall flow to hear from. The other Caucasians are even with the Italian. I have no axe to grind as I have quit the commercial queen business. But there is one point that they possess that is greatly in their favor and that is if you live in a location where there is a fall flow the Caucasian will be ready

for it, for they keep up brood rearing right through till fall. They have very strong wing power, and will work on the milkweed with their feet covered with the hair like threads that catch all other bees and hold them fast. I have seen lots of Italians dead on the blossoms, but never a Caucasian. They have one disease that I am trying to breed into the Italian, and that is "longevity" and don't be afraid of it, for there are too many that do not have it.

If Friend Strohschein had queens from all the breeders in Russia, as I have, he would be convinced of their worth. I have tried all colors and find the grey bee is the best.

Lansing, Mich.

How One Bee-Keeper Converted His Hand Extractor Into a Power Extractor.

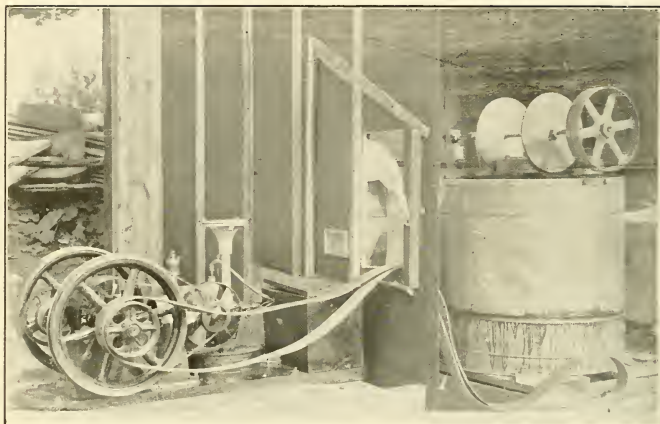
CHARLES BLAKE.

FRIEND TYRRELL:—I am sending a photo of my power extractor. It may help some who are in the same fix that I was in. That is, having hand power extractors that one cannot find ready sale for, and with no help to extract. The cut will make clear what the description does not.

For a long time I tried to find a way to use gasoline power, but could not do so at a low cost, so had to be my own power until I saw a photo of a friction gear got up by Mr. Wallace of Vanack, Ont. He kindly sent me all directions for making, but as I had no means of doing the work, I had mine made at a machine shop. I had mine made a little different, for, as you know, bee keepers all have their own ways of doing things, even though it is making a new kind of hive, which we soon get over.

The engine is one horse power and is connected, as you see, direct to a 12 inch pulley on a 35 inch sliding shaft.

As the engine runs 600 revolutions per minute, it gives me a speed of 300 revolutions per minute. On the shaft I have two 12 inch cast iron disks working on a 12 inch paper friction with a 1½ inch face and it has a face of ½ inch top and bottom of iron which allows a brake being used to stop reel of extractor. This also reverses it as by applying the brake the baskets reverse when the shaft stops. The shifting lever, which you see, is fastened to the bracket that carries the shaft and by having a spring and hook from the roof of the extracting house, I can let the reel run one way and then reverse. By hanging on a small weight of say, five or six pounds, it runs itself, allowing me to go on with my uncapping. By having a supply of uncapped combs in my 5 foot MacIntyre uncapping box, I can run off 1,000 pounds in 4 hours. Before starting to extract I take off enough combs from the hives to last me through the day.



Charles Blake's hand extractor converted into a power driven machine.

This is my first season with this arrangement and I believe if I had as heavy a crop as I had last year, I could extract 1,500 pounds in a day. I have taken 1,000 pounds out of half-filled supers and one must handle as many light combs as heavy, although not getting near so much out of them. The extractor is standing in a corner of a 10x10 foot portable extracting house with one side let down to allow the

photo to be taken. The mark on the side of the extractor is tar, to keep ants from getting up into the can as they won't cross tar. I find power so far ahead of my arm that I hope I am done with man driven extractors. A man can't keep the speed up even though willing, and the engine is as simple as a sewing machine to run.

Snow Road, Ont.

An Improved Bee Possible, Splendid Results Obtained.

LEO ELLIS GATELEY

TO almost every subject may be found existing more than a single point of view, and usually they are all well worth hearing. If we ever are to advance along any line we must be careful not to unconsciously adopt the attitude of the proverbial woman who, in her own mind, divided every question in dispute into "my side and the wrong side."

Whenever reference is made to im-

proving the present races of bees, a storm of protest is immediately raised on the sickly grounds that the difficulties surrounding the mating problem are too numerous to make the thing a success. No theoretical argument, however, can be stronger than personal experience, and in spite of what others may hold to the contrary, we desire to go on record as saying that no stock will respond more readily to intelligent

culture. The bee is capable of being changed in its habits and abilities, and the efficacy of thoughtful selection has in our own yards, which are devoted exclusively to honey production, been repeatedly and clearly demonstrated.

CONTROLLING THE MATING.

As young queens invariably mate on the wing, without the hive, there is small chance, if other bees are kept near, of preventing a cross with some inferior strain. Certain colonies can, of course, through elaborate stimulation, be rushed to the drone-rearing stage ahead of other bees; but only at great expense, which frequently proves most unsatisfactory. If few or no other bees are kept within a radius of two or three miles, a desirable male parentage is practically insured if only selected drones are permitted to fly. Our surroundings are, fortunately, of such description and are, undoubtedly, a prime factor in the success which has attended our efforts. For the past fifteen years we have been working toward improvement and as a direct result, actually secure paying crops during years when others are resorting to the sugar barrel to keep their scrub bees from starvation. What we have done, others can do.

ADDING NEW BLOOD.

Unlike most stock, bringing new blood into the apiary need never become an expensive or tedious proceeding. Two or three queens from some improved and reliable strain, introduced in spring or the preceding autumn, should afford a suitable foundation upon which, in the course of a single year, may be reared a uniform and hustling strain.

In maintaining an improved strain, bear in mind the essential point that any stock of bees, without an occasional addition of fresh blood, will quickly deteriorate. This is true of all animals and plants having life; being, perhaps, most strongly manifested in the human family, and bees are no exception to the rule. After an apiary has been skillfully bred along certain lines, it would, of course, be bad policy to bring untried blood into that stock to such an extent as to undo the progress attained. An occasional queen, however, will put new life into *any* apiary, and need not be extensively utilized until thoroughly tested. We are constantly on the watch for something better than we now have, and firmly believe that the possibilities in breeding a better bee are without bounds.

Germania, Ark., Jan. 30, 1911.



EDITORIAL

"Anticipate your opportunities, and they will not pass you by."

If a man falls into a well it is much better for him to begin figuring on how to get out than to spend the time worrying because he is in there.

"Do not attempt to knock the ball over the fence when a single is all that is needed to bring in the winning run."

Do You Want an Automobile?

I am satisfied there are a good many of my subscribers who are thinking of buying an automobile or gasoline engine. I want each one who is, to just drop me a postal card saying which they want to buy, and about when. It will help the Review if you will do this, although I have neither of the

above for sale. Will explain why I make this request when I reply to your card. This is important, so please write the card if you are thinking of buying during the next year.

A Bee-Keeper for Fifty-five Years—A Review Reader Since It Started.

J. L. Lewis is a familiar figure at the Michigan state bee-keepers' conventions. For fifty-five years he has been keeping bees, and has been a reader of the Review ever since it



J. L. LEWIS, DIAMONDALE, MICH.
A pioneer reader of the Bee-Keepers' Review.

started. He has been a resident of Diamondale, Michigan, since he was five years old, and he is now 69.

We are sorry to learn that Mr. Lewis has suffered a stroke of paralysis and is in very poor health.

Bees For Sale.

The above sign will no doubt be very much in evidence this fall and next spring. After the short honey

crop this year, a great many so-called bee-keepers will conclude bee-keeping doesn't pay, and will want to get out. This of course will thin the ranks perceptibly and is the best time in the world for the fellow with grit to *hang on*. With so many wanting to sell bees you can buy cheap. Next year is apt to be a good one when with your "more bees" and less competition you can reap the benefit. Even if it is a poor year it only thins the ranks that much more and makes the price that much better when the good year does come.

Just as soon as the good season does return, then there will be another crop of bee-keepers raised, and then is a splendid time to *have bees for sale*. All these fellows will want to get into the ranks, concluding that it is "just the business they were looking for." Just now your slogan should be, "Buy more bees."

Having Queens Mated Above an Excluder.

In at least one-half of the cases where unsealed brood is placed above a queen excluder, queen cells will be built and queens hatched. I know this from the experience of hundreds of cases, during several years, but have never tried to have these queens fertilized and begin laying in these upper stories. As nearly as I can learn, this plan of getting queens fertilized has not proved a practical success. Mr. G. M. Doolittle made a success of it, and so reported in his *Scientific Queen Rearing*. Later he reported that he could succeed only during the flood of honey that comes during the basswood harvest. Now he reports failure even during the basswood flow, and he admits that he does not know why. Of course, the keeping of nuclei over a strong colony, to get the benefit of its heat, is a different "proposition," as they say; there is where there is a

commingling of bees between the upper and lower stories, with only a queen excluder between.

W. Z. H.

Pennsylvania Bee-Keepers' Summer Meeting.

This was held at Reynoldsville, Pa., July 11 and 12. The following demonstrations were given: Handling bees in practical work and apiary inspection; Handling bees for exhibition; Illustrated lecture on late developments in apiculture; Detection and cure of foul brood; Transferring from a box to a movable-comb hive.

Pennsylvania bee-keepers have just secured a foul brood law which was turned down two and four years ago.

In one of the resolutions of the convention the members refer to the former editor of the Review, Mr. W. Z. Hutchinson, as an indefatigable worker and speak of his services to mankind and to the bee-keeping world. They sincerely regret his loss and extend their sympathy to Mrs. Hutchinson.

Dr. Harvey W. Wiley.

It would be hard to estimate the amount of good that has been done the bee-keepers by the work of Dr. Wiley.



(FROM THE CLEVELAND "PLAIN DEALER.")

The friends of Dr. Wiley will certainly appreciate this cartoon.

Only a few years ago we could find our stores full of mixtures sold to the public as honey. In Michigan at least it would be hard to find any today. This has been brought about by our pure food laws, which have come about by the excellent work of Dr. Wiley.

When the "interests" undertook to bring about his removal as Chief of the Bureau of Chemistry, they certainly struck a "bees' nest," as shown in the cartoon. Let us be glad that such was the case.

Died From Bee Sting.

The Rev. Geo. W. Fuller, of Sykesville, Pa., sends me a clipping from the Sykesville Post-Dispatch, telling of a man killed by one bee sting. As the circumstance is rather peculiar I give the item here:

"Philip Dusch, who lives near Luthersburg, met death in a most peculiar manner on Monday.

"Death was caused by a bee-sting. Mr. Dusch went out to one of his numerous hives to place the cap on, after eating his evening meal, and shortly afterward other members of the family heard him utter a shriek of pain and ran to his assistance. He had fallen and was carried into the house where medical aid arrived shortly afterward. Mr. Dusch told the members of the family that he had been stung once on the point of the jaw. Before the doctor arrived he was dead.

"Examination showed no other sting on his body and the quick action of the poison cannot be explained as Mr. Dusch had worked among the bees for many years and been stung many times.

"The deceased was 63 years of age and is survived by his wife and a family of several children. Mrs. William Clark and Mrs. Mary Harder, of Maple avenue, DuBois, are sisters."

Hon. Geo. E. Hilton.

In the August Review I briefly mentioned the death of Mr. Hilton, which occurred on July 12th, 1911. I expected to give a brief sketch of his life and last illness in this number, but the particulars, which Mrs. Hilton wrote and had sent to me, in some way failed to reach here.

I can say, however, that in the death of Mr. Hilton the bee-keeping fraternity lost one of its most valuable members. I am pleased to give his cut herewith.



The late HON. GEO. E. HILTON,
FREEMONT, MICH.

Just Listen to This.

"The Americans with all their go-ahead ways and labor-saving contrivances have yet to evolve a convenient fastening for the hive cover. As a matter of fact, the progressive Yanks still adhere very strongly to a large rock, stone, drain-pipe, or some other equally unhandy means of keeping the lid in place. For my part I decline to expend

my energy removing stones every time I wish to open a hive. It is much easier to simply remove a pair of staples (one on each side) with the fingers."—T. RAYMENT, *Australasian Bee-Keeper*.

I wonder how many up-to-date American apiaries the writer of that article ever visited? Anyway, I don't know but I would rather lift off a stone that I could find again than paw around in the grass for lost staples.

Right Between the Eyes.

One of my subscribers (I would like to give his name if I was sure he would not object), takes issue with Mr. Demuth's article in August Review, and my comments on the same. He says: "Say, Friend Tyrrell, that advice given by Demuth and sanctioned by yourself is not at all needed by the most of fellows today. Do you know that hosts of people on this continent are going the pace that kills, with the result that they are physical wrecks at middle age? What about ———, ———, and other so-called lightning operators we used to hear about? On the scrap heap in so far as their health is concerned. Have been through the mill and am just beginning to get some sense along that line. For a good, sane article along that line see what Cavanagh of Indiana has to say in a recent issue of A. B. J."

Now that's the kind of a subscriber I like. Give it to me right between the eyes. Doesn't agree with me and isn't afraid to say so.

But wait. There may not be so much difference between us as you think. In your case and the two or three others which you mention it may be that you have been "going the pace that kills." But take the average fellow that you know. How many of them are using their time to advantage? How many of them are not really wasting more time than it takes to do the work they do do in the balance? The average man lacks system.

Then take your fellow who is over-worked. Nine times out of ten it isn't overwork but *over-worry*. Worry will kill much quicker than work.

No, the average man does not have enough to do. He may *think* he has, but watch him a little while and you will see he hasn't. Give him a big job to do, make it necessary for him to plan his work and develop system and that man will generally accomplish greater results with less labor than the fellow who doesn't have enough to do.

Don't Bee-Keepers Know Foul Brood?

It is hardly conceivable that in this day and age, bee-keepers with any experience whatever should not know American foul brood, and yet there is something radically wrong somewhere, as is shown by the following extract taken from a letter recently received from Michigan's Foul Brood Inspector:

"Now, Mr. Tyrrell, in all seriousness, I think the bee-keepers themselves are more to blame than anyone else for the spread of foul brood. Too many of them do not seem to know the disease until it reaches its last stage. I have gone into the apiaries of some of your members (M. B. K. A.) who told me prior to my inspection that they had no foul brood and never had, yet I proved to them that they had it last year, and in some instances nearly if not quite half of their apiaries were affected this year.

"Then another thing: two-thirds of all the inspection I have done so far I have had to go out and 'dig up' for myself. For instance, I stopped over one train at ———, and one man who has 83 colonies of bees said he had no disease in his apiary, yet every hive I examined was diseased. In another yard containing 51 colonies within 80 rods of the first mentioned, a man had cleaned out an extracting super which contained some brood and a little honey and had laid

the combs on a hive for the bees to 'clean up.' I examined this comb and found it *very* badly diseased, yet I was informed when I first arrived that there was no foul brood there.

I have had but one call so far from a member of the Association for an inspection, and but three altogether. Now, if the Association members would take this matter up and let me know where foul brood exists I could lay out a regular route and do much more work.

"I am putting in all my time at this work and my heart is in it, and with the proper co-operation on the part of the members of the Association much more could be done. I have been at work as early as five o'clock in the morning, and have been trying to cover all the territory I could and do the work well.

"Very truly yours,

"G. E. SANDERS.

"710 Kalamazoo St. W.,

"Lansing, Mich."

Right here let me say that Mr. Sanders visited me last spring, right after his appointment as inspector, to fill the place of Hon. R. L. Taylor, who resigned. I was much impressed with his earnestness, and believed he would "make good." I have received some very flattering letters concerning his work, of which this is a sample:

"G. E. Sanders, the State Foul Brood Inspector, has just completed his second visit to this vicinity. He has inspected 25 apiaries in and around Greenville. Of these 17 had foul brood. Same were mostly rotten with the disease.

"Mr. Sanders is certainly seeing to it that the owners are cleaning it up. Give him all the help you can, as it will certainly be pushing a good thing along.

"FRANK RASMUSSEN.

"Greenville, Mich.

"June 16th."

But the real question is this: What's the matter with our bee-keepers? Don't they know foul brood, or don't they

want to? I, too, have had bee-keepers tell me they did not have the disease, only to find their bees rotten with it. If a man don't know the disease, he is open to severe criticism for not knowing. If

he does know and denies it, no criticism is too severe. It is no disgrace to have foul brood. It is a disgrace not to try to get rid of it. This applies to *you*, no matter where you live.

SELECTED ARTICLES

AND EDITORIAL COMMENTS

The Temperature for Keeping Honey.

Editor Hurley says in the *Canadian Bee Journal*, in reply to a subscriber's question:

A subscriber asks us if his honey will be deteriorated and its value lessened because of its having gone during last winter through a temperature below zero. If it was well granulated before the frost came on it is probable that it will not be much injured. No wise honey producer, however, will allow his honey to pass through a temperature below 60°.

Now, I would like to know *just why* a temperature below zero would not injure candied honey, but would that not candied. I suppose, of course, extracted honey is meant. In fact, I should like to know just how below-zero weather injures extracted honey, anyway.

Every One His Own Foul Brood Inspector.

I agree heartily with what Editor Root says in an editorial in *Gleanings in Bee Culture*, as follows:

Foul brood, both European and American, has gotten an awful start, and it is going to need the combined efforts of bee-keepers and inspectors to hold the disease in check. This simply means that every bee-keeper should go over his own hives carefully; and if he finds disease, apply treatment without waiting for the inspector, who may

have on his calendar a hundred other calls just as urgent as his. Every intelligent bee-keeper ought to be his own foul-brood inspector. When, however, he finds that one of his neighbors is negligent and careless, or one who will not administer treatment, then it is time to call in an inspector. It is at just such times when we need police authority.

Mice; How to Convert Them Into Friends of the Bee-Keeper.

That man Crane is a corker. Here we have been killing mice all these years, and Friend Crane, instead of killing them, has set the little pests to work for him. In *Gleanings in Bee Culture* he tells how:

Wesley Foster tells us on page 557 of the fondness of mice for the thorax of bees, and the value of bees as bait for catching mice. I have noticed this fondness of the mice for this kind of diet; but, instead of using the bees to catch the mice, I used the mice to help the bees. Almost every winter we lose more or less bees in cold weather, and find in such hives some combs filled with dead bees. If such combs are placed in strong colonies during warm weather the bees will, after a time, clean out the dead bees; but it is a lot of work for them, and I have many times placed such combs where the mice could get on all sides of them, when they soon learn to pull out the dead bees for the choice morsel of the thorax. The mice are not apt to gnaw the combs if they can get on all sides of them.

Bee-Keepers, Get Right.

In *American Bee Journal*, J. J. Wilder goes after the Dixie bee-keepers as follows:

Bee-keeping in Dixie is burdened with Doubting Thomases, and bee-keepers that are "on the fence," and don't know which side to get off on—better bee-keeping and "more bees," or just continue to keep a few bees in any kind of a way, as usual.

If interested bee-keepers knew that they could go ahead and establish a large bee-business, and thereby make money, they would jump at the proposition. But they are standing around looking on with doubtful eyes. Can you give a solution to this critical problem that confronts so many interested?

Then there are some bee-keepers who hold some amount of prejudice or ill-will, or in some way are distant towards some member of their craft. Brother bee-keepers, this ought not so to be. Let's get right, and have the good, warm feeling for each other that we should have, and stand ready with helping hands to assist a brother in any way opportunity may afford.

Good for you, Brother Wilder, give it to 'em. The trouble with most of us is that we are *afraid to start*. Remember that old swimming hole? Remember that when we tested the temperature of the water with just the ends of our toes, that it was "Oh, awful cold?" But when we plunged in all over we could just laugh at the fellow who was afraid, for it just felt fine? Well, that rule applies all through life. The fellow who isn't afraid doesn't get hurt half so hard as the fellow who is. Of course we expect he will use judgment.

Ripening Honey on the Hives.

The reason which has generally been advanced for leaving the honey on the hives until after the honey-flow before extracting, is that a better grade is thus secured. Mr. Scholl gives in addition another reason, in *Gleanings in Bee Culture*, and that is that it saves time at a very busy time for the bee-keeper. Mr. Scholl's arguments are as follows:

For more than ten years we have followed the practice of leaving our honey on the hives until after the honey-flow. This insures a product that can not be obtained by any other method—a thick, heavy-bodied, well-ripened article that has a velvety taste and an excellent flavor, very much unlike the most of the honey on the market. It gives a honey that will be bought by any customer who may happen to get a taste of it if he likes good honey. "It is thick and ripe enough to chew," if left on the hives long enough; and the aroma that goes with such honey is lacking in that which is taken off earlier in the season.

Aside from the question of the quality of honey obtained by this practice we make use of it for another reason. This is a very important one with the bee-keeper managing large numbers of colonies in many apiaries. By tiering up during the honey-flows, and giving his entire time toward securing the most honey at that time, leaving the removal of the crop until the flows are over, an extra advantage is gained. The attention given to the bees during the flows insures for him a larger crop, and he can not afford the time to take off honey during this period. After the flow is over, there is nothing else to worry him, and his time is not worth nearly as much, so that he can make it more valuable by devoting it entirely to the harvesting of a crop of a superior grade of honey.

Bee-Keepers and Associations.

The *Canadian Bee Journal* contains an address given by Harry Lathrop before the Wisconsin State Bee-Keepers' Association, which contains some suggestions worthy of thought. Among other things he says:

The work of a bee-keepers' convention, it seems to me, should consist not so much in going over those petty details of manipulation year after year as in that of dealing with those larger questions that concern bee-keepers as a class, and which have a vital bearing on the industry of bee-keeping. That some such work has been done in the past we will not deny, but the amount is very small and the field is large for future work. That little has been accomplished is proven by the fact that the bee-keepers of Wisconsin as indi-

viduals are working independently and without plans for mutual aid; in other words, without CO-OPERATION.

In order that a convention should take up these greater questions that are calculated to be of great importance to the whole body of bee-keepers, it must be representative. This the Wisconsin Bee-Keepers' Association can not claim to be since only a mere handful ever belonged to it or took any interest in its deliberations. The present plan has been tried long enough to prove its utter failure to do the work that is needed, therefore some forward step should be taken, some new plan should be formulated.

A representative body that does not represent is of no particular good to the larger body. In order to represent there must be delegated authority. This leads me to suggest a plan for the re-organization of Wisconsin bee-keepers. The plan is this: To create local associations in all parts of the state where there are resident bee-keepers; each association to hold a meeting at least once each year and that at that meeting to appoint a delegate to a state convention, which by reason of these delegates shall represent the whole body. I have not space in a paper like this to go into details regarding the work that such a central organization should attempt but I will say for one thing, that it should establish uniform prices and grades. The indiscriminate butchering of prices should be stopped at once and forever and this could be done, if in no other way, by having the state association offer to buy all the honey for sale in the state under a certain price.

This plan will undoubtedly work, providing there can be enough bee-keepers brought together in the local associations to make their meetings successful. Some such plan will have to be adopted by the National before it attains its full strength. But there is one thing the article lacks—just *how* would you start to form this plan of organization, Friend Lathrop?

Honey-Packages and Their Display.

In the *American Bee Journal*, G. C. Grenier goes after the tin honey-package in great shape. Read this:

In the case of extracted honey, the

package we use plays an important part in pleasing the consumer. Not only should it be tempting in appearance, but it should not be too extravagant as to its cost. From the accompanying picture, which represents my weekly display at our city market, it will be seen that I use the standard glass top Mason fruit-jar, pints and quarts. Although I pay a good price for them—much more than any of the many advertised tin containers would cost me—they are the cheapest in the end. When they are filled with water-white, sparkling clover honey, as I produce it in my locality, with a finishing touch of a neat, tasty label, and exhibited as shown in the picture, it is not strange that my wagon brings forth many exclamations of admiration, and, as a consequence, many sales follow.

I admit that those tin packages have a few good points, but to compare them with the Mason jar and try to make producers and consumers believe that they are cheaper and better, is all talk. Travel all the country over from north to south, from east to west; go where you may, you will find those tin packages on all garbage piles, not only by the hundreds and thousands, but by the millions. They are gathered up as soon as they are stripped of their contents and carted to some out-of-the-way place as useless rubbish, but not one of those distasteful (?) Mason jars can be seen! Every one that was sold with honey and emptied is serving a profitable purpose in some family household, while somebody's pocketbook has to suffer for that endless waste of useless tinware.

Yes, Friend Grenier, I used to argue the matter in the same old way. Had honey put up in jelly glasses, pint, quart, and two-quart Mason jars. Honey looked splendid. Also had a fancy glass olive-bottle with a glass cover. Sold lots of them to grocers, but the grocer didn't sell them so well as the jellies. And yet I am now using only a plain tin pail holding ten pounds of honey. Why? Because I believe we have been catering too much to small packages. Glass is heavy, expensive, and easily broken. Anyway, I am pretty well satisfied with the tin package for *retail trade*.

The Pros and Cons of Corrugated-Paper Cases.

Just now, when there is considerable discussion regarding better shipping cases, the paper case comes in for a good share of consideration. It certainly has some points in its favor in its favor that must be considered.

Mr. J. E. Crane, of Middlebury, Vt., one of our largest comb honey producers, speaks very highly of this case in *Gleanings in Bee Culture*, as follows:

Mr. Foster asks me several questions on page 323 in regard to corrugated-paper cases, which I will try to answer. First, he asks if corrugated cases will carry honey as safely when shipped uncrated as double-tier cases when crated. That is a rather hard question to answer, as we have never used double-tier cases; but from our experience in shipping paper cases in small lots I should expect there would be little difference.

Another objection Mr. Foster raises is that "the partitions make it difficult to remove the sections of honey." It is not so difficult as you imagine, my good friend. As the partitions come above the sections it is both simple and easy to remove one or two partitions, when the sections of honey can be removed even easier than when packed solid as in wooden cases. "What are the advantages of the corrugated case where honey is not shipped other than in car lots?" In other words, of what use is it to pack in paper cases when you ship in car lots, and feel reasonably sure it will go through safely?" Well, I used to feel much that way; but the efforts to sell honey direct to retail dealers opened my eyes. We are apt to think if we can only ship our honey in a block or car lot to the large city dealer, that is all there is to it—it is his business to look after it then. It is out of our sight and out of mind; but we fail to remember that the large city dealer does not sell by the carload, but has to sell, in small lots, from one to a dozen or more cases to small retail dealers; and the carloads must sooner or later be broken up into small lots and reshipped in every direction, and very often gets pretty rough treatment. Now, these small shipments, if the honey is in wooden cases, must be crated, or run a great chance of getting broken,

while the corrugated cases can be shipped with little danger of breakage, although uncrated. It costs in the large cities from a quarter to half a cent a pound to crate honey; and then the freight or express is more because of the additional weight. You remember what Mr. Byer told us some time back in *Gleanings*, that a dealer in Toronto told him he could ship these cases to the Provinces of Manitoba, Saskatchewan, and Alberta without breakage.

That Automobile Trailer.

Quite a little has been written about the use of the automobile in visiting out-apiaries. Mr. F. B. Cavanagh tells in *Gleanings in Bee Culture* about a trailer that he uses. This is simply a two-wheeled cart attached to the back of an ordinary auto. He uses it not only to carry hives and appliances, but also to move bees. With it he does not even fasten the bees in the hives, but encloses the whole load in a wire cage:

We do not shut the bees in nor do we fasten the hives together in any way. A removable wire cage completely surrounds the hives (the front section was left off in the picture), so that nothing can fall off the load. If daylight approaches, causing the bees to fly, we draw the canvas top tightly over the load (it is tacked to one side), and confine every bee to the cage. A fine breeze circulates through the hives; and, although the weather was very hot, but few bees tried to escape through the screen. I suppose it must have taken their nerve to see through grated bars the landscape swiftly whirling by. The worst feature was in unloading the bees at night, and, as every bee-keeper can imagine, they "didn't do a thing" but sting, sting, sting, with bees all over the hives when we reached the yards. However, with good smoke we managed very well, and left the trailer quite free of bees each trip. I never care if bees are out of the hives so long as the stragglers are at the yards, one or the other, so that they can hunt a hive when daylight appears.

Speaking further about the economy of the auto, he says:

We figure that, while an automobile is expensive, speed is essential in out-apiaries scattered as far as 20 miles

apart. A horse would take three hours in going 15 miles, or six hours spent on the road. The auto makes the same distance in $\frac{3}{4}$ of an hour or less, and with much more comfort; consequently we work our eight yards nearly as easily as though they were near home. In a day of ten hours the horse outfit leaves four hours to work with bees, while the auto leaves $8\frac{1}{2}$ hours, or $4\frac{1}{2}$ hours in favor of the auto in each day's work. A saving in wages of four men for $4\frac{1}{2}$ hours a day is 18 hours for one man. At 20 cents per hour this makes \$3.60, which more than pays our

expense of the automobile trip. Does it pay to own an automobile? We think it pays us well, although not so much for hauling bees as we anticipate for the extracting-power outfit, motor drawn, which is nearly completed. It contains power extractor, engine, steam uncapping knife, combination gravity and wire-cloth strainer, and, in fact, everything we could think of for convenience, all mounted on the trailer, and covered with canvas and wire cloth. At a later date we may expose our little selves at work taking the spoils from the bee with this horse-terrorizing contraption.

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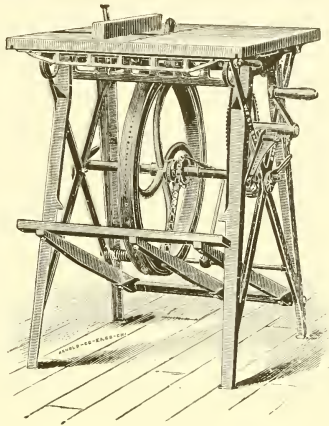
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No Fish-Bone

is apparent in comb honey when the Van Deusen, flat-bottom foundation is used. This style of foundation allows the making of a more uniform article, having a very thin base, with the surplus wax in the side-walls, where it can be utilized by the bees. Then the bees, in changing the base of the cells to the natural shape, work over the wax to a certain extent; and the result is a comb that can scarcely be distinguished from that built wholly by the bees. Being so thin, one pound will fill a large number of sections.

All the trouble of wiring brood frames can be avoided by using the VAN DEUSEN WIRED.

Send for circular, price list, and samples of foundation.

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Located in the sunny Sanlius Valley, Sanford, Colorado. Good home market and three miles from railroad station.

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We are offering a year's subscription to the American Bee Journal and a copy of Doolittle's "Scientific Queen-Rearing"—**both for only \$1.00**—the regular subscription price of the Bee Journal alone. Or, if you prefer it instead of the Doolittle book, we will mail you a copy of "The Pearce Method of Bee Keeping." You might send 10 cents first for the three copies referred to, and then, after reading them, send in your order for a year's subscription. We are sure you would be pleased with the American Bee Journal. It is now in its 51st year. Address

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MEXICO AS A BEE COUNTRY

B. A. Hadsell, of Buckeye, Arizona, one of the largest bee-keepers in the world, has made six trips to Mexico, investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated 32-page booklet describing the tropics of Mexico as a Bee Man's Paradise, which is also superior as a farming, stock raising and fruit country, where mercury ranges between 55 and 98. Frost and sun-stroke is unknown. Also a great health resort. He will mail this book free by addressing

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The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent, when a shipment sells for as much as one hundred dollars.

BOSTON.—Fancy white comb honey, 15c to 16c; No. 1, 14c to 15c; white extracted, 12c; Beeswax, 30c.

July 22.

BLAKE-LEE CO.,
4 Clatham Row.

NEW YORK CITY.—*Comb Honey:* Last year's crop of white is well cleaned up but considerable buckwheat, amber and mixed is still unsold and the demand for these grades is next to nothing. We received some small shipments of new crop white from the South, which finds ready sale at from 13c to 15c lb., according to quality.

Extracted Honey: Demand good. Arrivals are quite heavy from the South and same is selling at from 65c to 90c per gallon, according to quality. No new crop California or nearby on the market as yet. Beeswax quiet at 30c lb.

HILDRETH & SEGELKEN,
82 Murray St.

CHICAGO.—The new honey is beginning to arrive on sale. A little fancy comb has sold at 18c per pound, and judging from the reports that reach this market it will probably command a range of 17c to 18c, beginning with August month. Extracted white ranges from 8c to 9c, according to kind and quality; all white clover (if ripe) brings 9c; amber grades of good flavor bring 8c; less desirable, 7c to 7½c. Beeswax is ruling steady at 31c to 32c for prime grades and sells upon arrival.

July 22.

R. A. BURNETT & CO.,
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CINCINNATI.—Comb honey is now coming in and finds ready sale at from 15c to 16c from our store by the single case. Extracted honey, new crop, is also coming in quite lively, and for the finest water white we are getting from 9c to 10c per pound in crates of two 60-lb. cans; amber honey in barrels, from 6c to 7½c, according to the quantity and quality purchased. The above are our selling prices.

For choice bright yellow beeswax we are paying from 28c to 30c a pound, delivered here.

July 17.

THE FRED W. MUTH CO.

KANSAS CITY.—There is no comb honey on our market, the crop of 1910 being all cleaned up; receipts of new No. 1 Comb would sell for \$3.50 per case of 24 sections, and No. 2 stock for 25 cents less; amber at \$3.00 to \$3.25. There is some old extracted on the market selling at 8½ to 9 cents for white, amber bringing 7 to 8 cents. Beeswax selling at 25 to 28 cents.

June 19.

C. C. CLEMONS PRO. CO.,

TOLEDO. There is no new honey being offered as yet, and very little demand for same. New white clover comb honey would bring 16c to 17c per pound in a retail way. There is some demand for extracted honey, but owing to prices asked it will move slow. However, as soon as the berries are gone and the larger producers get their crop ready for market, there will be a better demand and prices will decline somewhat. Beeswax is quiet and brings from 28c to 32c, depending on the grade.

July 17.

S. J. GRIGGS & CO.

DENVER.—Owing to continued hot weather, local trade in honey is light but demand for carlots is good. We quote our local market as follows: No. 1 White, per case of 24 sections, \$3.35. No. 1 Light Amber, \$3.15; No. 2, \$2.95. White extracted, 8½ to 9 cents; light amber, 7½ to 8 1-3 cents. We pay 25 cents cash and 27 cents in trade for clean yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS' ASSN.

August 19.

CINCINNATI.—We have had our first car of comb honey to arrive, which we are selling at 16½ cents per lb., f. o. b. Cincinnati, for No. 1 white. There is no demand for off grades. We are selling white extracted at 10 cents per lb. and amber in barrels at 7 cents. Beeswax in fair demand at \$33 per 100 lbs. Above are our selling prices, not what we are paying.

August 17.

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To promote and protect the interests of members.

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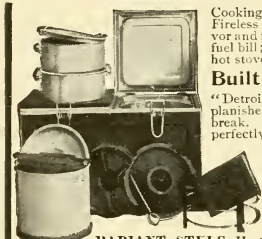
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By return mail, untested, 75c each. Tested, \$1.25. Breeders, \$3.00. Carniolans, Cyprians, Banats, Caucasians, untested, \$1.00. Tested, \$1.50. Breeders, \$3.00. Two 5-gallon honey cans in case, 59c. One-gallon, \$8.25 per 100. One-pound Powder bottles, \$3.75 per gross, in crates. In reshipping cases, \$4.50 per gross.

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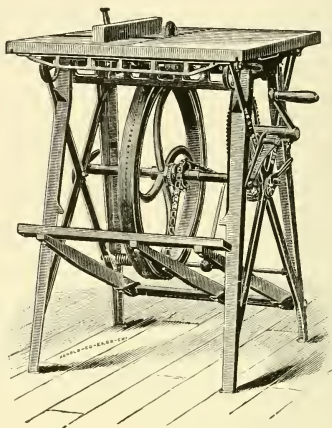
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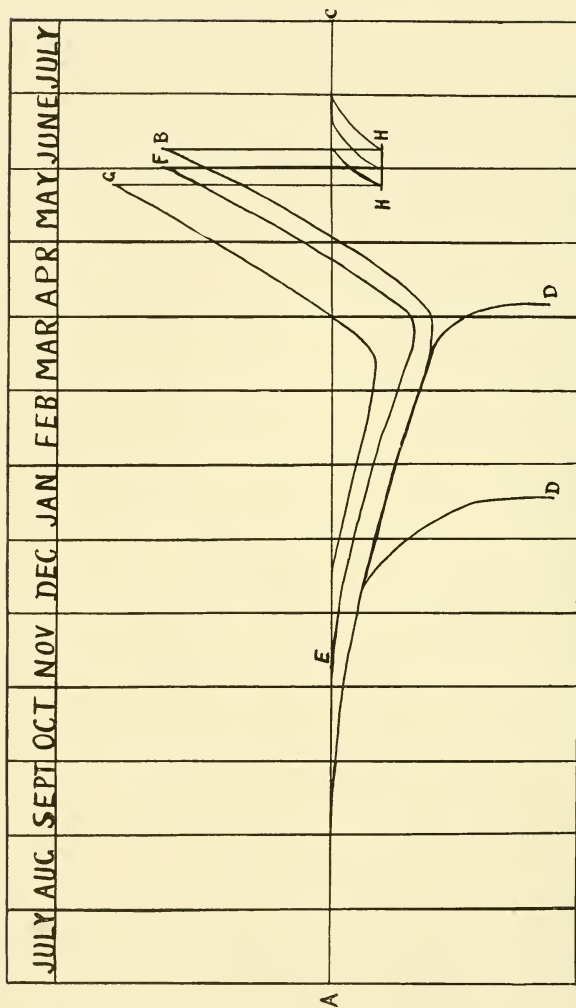
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GRAPHICAL REPRESENTATION OF THE LIFE CYCLE OF TYPE COLONIES OF BEES.

ABC Average colony life cycle. *AD* Life cycle of colony dying at critical point. *AD* The short of stores colony. *AEFC* Life cycle of colony that has been breeding late. *AEFC* Life cycle of colony that has been breeding late and that has been properly protected for the winter. *GH*, *BH*, *BH*, Relative strength of swarms.

The Bee-Keepers' Review.

A MONTHLY JOURNAL

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E. B. TYRRELL, EDITOR AND PUBLISHER

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VOL. XXIV.

DETROIT, MICHIGAN, OCTOBER 1, 1911.

No. 10.

Essentials in Outdoor Wintering.

RALPH BENTON.

OVER and over again there have been borne in upon the writer a few cardinal points to be observed in the successful wintering of bees in the open. These points have been raised and tested under different conditions and they always fundamentally remain the same. In his early bee-keeping experience under the changeable and trying winter climatic conditions of Maryland and the District of Columbia the writer has abundant opportunity to observe the effects of different modes of wintering and certain features were settled upon as of important practical bearing in the wintering problem. Later a series of varied and elaborate experiments with the same end in view were prosecuted through several seasons under the northern rigors of Montana winter weather, where the mercury not infrequently falls from 30° to 40° below the zero point (Fahrenheit), and where a dry cold prevails, with approximately the same results. And finally, during

the past four or five years in the milder, but damp, foggy, penetrating and not entirely agreeable winter weather of California, much evidence through personal experience has been accumulated pointing to the universality of many truths and features indispensable to successful winter practice.

Of late there has been much interest manifested in determining just how much cold the individual bee will stand and for what duration of time low temperatures will be stood. The writer has always held that bees could stand almost any amount of cold for varying periods of time provided certain other factors of humidity, nutrition, etc., remain favorable and constant. The simple experiment of picking up bees that have lain out over night on the snow crust in the dead of winter, and which from all appearances are dead, and by the application of dry heat bringing them back to activity, of itself demonstrates the extreme resistance of the honey bee to cold. This condition

would naturally be looked for in so near a relative to many forms of solitary hibernating insects such as yellow jackets, solitary bees and even the semi-social bumble bees. It is a common practice in the shipping of live bumble bees to send them in cold storage, thus taking advantage of the native ability of the queen bumble bee to survive extreme temperatures and resuscitate her active life when favorable conditions again surround her. It is this inability on the part of the individual honey bee to regain activity without outside warmth other than her own which ordinarily precludes her surviving any great amount of cold. In colony life, however, such outside warmth is in a measure supplied the individual bee, and the semi torpid winter cluster, if unbroken, normally regains activity even after subjection to low temperatures for a time of comparatively long duration. It is this fact which makes the problem of wintering bees in the open air a hopeful one; and the provision of a goodly and compact cluster of comparatively young and vigorous bees in each colony constitutes the first essential of successful wintering out-of-doors.

LIFE CYCLE OF THE BEE.

To make the full force of this principle plain and to assist in making more evident subsequent principles that we are to discuss we present the accompanying graphical representation of the colony's annual life cycle, in which the curve *ABC* indicates the probable normal fluctuations of the average colony of bees from one July to the next succeeding July. In following the course of the curve it will be observed that the even tenure of the colony life as it runs along through July, August and into September, begins to gradually fall the latter part of September as brood rearing activities slow down, and continues so to fall until about February

when the critical period of rapid death rate is reached and the vitality of the colony is put to its utmost test. If the colony rallies and succeeds in getting brood rearing operations under way and the rate of increase ahead of the rate of decrease, the colony rapidly gains during the last of March and through April and May to the first of June when the maximum turning point is reached and the annual swarm is cast. This event reduces the colony somewhat below normal but by July first equilibrium has again been established and the year's cycle is complete.

On the other hand should the colony by reason of a lack of bees in sufficient number to organize the brood nest, or because of a defective queen, or even because of the absence of sufficient food, or because of any two or three of these reasons, not surmount the critical period its course would be that of *AD* resulting in its dwindling to final death. Should a marked lack of stores occur this course would be hastened and the existence of the colony terminated in January or February as represented by the curve *AD*.

LATE BREEDING DESIRABLE.

If the first principle of copious breeding during the late summer and fall be observed it will be noticed that the colony does not begin to decrease in numbers by drawing upon its reserve strength until sometime late in November at about the point *E*, and, consequently, the colony's course is more nearly that of the curve *AEFC*. It will be observed that in this instance the colony not only does not begin to diminish in strength until much later, but never reaches quite so low and dangerous a critical point as the type of colony represented by the curve *ABC*. More than this, the swarming period of such a colony in view of its more rapid recovery of colony activities in the spring of the year, reaches

the swarming period somewhat sooner, say the latter part of May, and, what is more to the point, recovers from its swarming fever sooner and is ready for the storage of honey several weeks prior to the type of colony taken as the average, e. g., the colony represented by the curve *ABC*.

Now, if, in addition to late summer and autumn breeding, the colony be given suitable protection in the proper manner adapted to the two-fold purpose of retaining the colony heat generated, and of permitting the free passage outward of moisture, the colony's activities approach more nearly the curve *AEGC* in which the decline in numbers is slower, never so great as is especially noticeable at the usual critical time in February and March, and the swarming period is not only sooner reached but much more vigorously reached, resulting in the casting of a more populous swarm (the relative size of swarms being indicated in the diagram by the vertical lines *GH*, *FH* and *BH* respectively), which swarm may be gotten in shape for the honey harvest in June and July along with the parent colony.

STIMULATIVE FEEDING ADVISED.

To keep bees breeding during the autumn months, stimulative feeding may be practiced, care being taken to guard against robbing. Each colony should have a young vigorous queen and in localities where the nights are cool extra care must be taken to guard against the escape of heat. Top stories should early be removed in order to prevent the bees from storing their winter supply of honey in a scattered manner, and, if queen-excluders are not used, in order to head off the queen's organizing her brood nest in the warmer regions above. In milder climates where it is the practice to leave top-stories on the hives for the protection of the combs it will be found economi-

cal to interchange the stories, placing the brood chamber above for the winter months. The amount of honey or stores necessary to successful wintering varies greatly in accordance to the protection given the bees. If adequate protection be given the colony, bees will winter successfully on about what they actually need for their consumption, or about twelve to fifteen pounds of honey. With less protection more honey is consumed in the production of heat to replace that which escapes; and in milder climates the greater activity on the part of the bees during the winter months leads likewise to a greater consumption of stores. The result is that twenty to thirty pounds is more nearly the amount to be left for wintering. There are many friends to the wintering of bees on greater quantities of honey, forty pounds or more; and the adherents of stores in super-abundance point to their success in wintering as proof of their case. We maintain, however, that the wintering of bees on an excess of stores is a practice that the average bee-keeper can ill afford, for it is entirely unnecessary if the proper protection be given the bees. The presence of solid sheets of honey in the colony serves as a great holder of heat and evener of temperature, and herein lies the value of an extra abundance of stores. Just as good success in wintering can be attained, and much more economically attained, on less stores if protection be given the colony in the shape of several inches of continuous and moisture-transmitting packing about and close to the cluster. The effectiveness of packing is greatly increased if it is close to the cluster, that is, separated from the bees by the least possible obstruction, nothing more than a heavy grade of canvas or duck. For colder climates we recommend placing the frames on end and across the entrance in what the Germans call

"Warm Bau" (literally "warm building"). This is done in order, firstly, to better collect the heat above for the cluster; and secondly, to guard against drafts, for in a colony so packed when a draft passes in at the entrance it then strikes the side of the outside comb rather than the edges of several combs, and becomes diffuse before it reaches the cluster. The top packing should be connected with free ventilation with the outside, permitting the outward passage of the moisture rising from the cluster below.

STORES AND QUIETNESS.

Besides late breeding, a sufficient quantity of stores rightly disposed, and heat holding protection effectively arranged with free ventilation, the colony should enjoy perfect quietness. Everyone realizes the importance of never breaking the cluster when once it is formed during cold weather, but the full value of perfect quietness is not as generally appreciated as it should be. There is a great diversity in the wintering qualities of the different varieties of bees, and one of the important factors we are convinced, contributing to this diversity is the noticeable difference in degree of quietness among varieties of bees in their conduct upon the combs and in the cluster. One of the strong points in favor of Carnolians for cold climates is not so much that they come from a cold country, for the Germans come from an equally cold climate, but rather their extremely quiet clustering habits quite in contrast to the ceaseless activity and buzz, buzz of their German consins.

It goes without saying that bees should never be needlessly disturbed or even jarred in extremely cold weather; for if so jarred a whole train of events are likely to be set in operation which does not contribute to the welfare of the colony and may even result disastrously to it. If a colony during win-

ter weather be jarred the bees are incited to activity, resulting in the production of heat and moisture in excess. This moisture laden warm air arises, and, meeting the cold surfaces of the upper portions of the hive, condensation takes place, producing dampness. If there is no top packing with free ventilation above it, water may be even accumulated in sufficient quantities to trickle down over the stored honey and bees. The honey gathers moisture, bursts its cappings and may not uncommonly sour and begin to ferment. The pollen, despite its protective covering or veneer of propolis, may begin to support a heavy growth of fungi as will also the brood combs themselves and the dead bees collecting in the hive. The bees themselves, through cold, dampness and improper food, develop not infrequently mild forms of dysentery, and the combs and hive become soiled with diarrhoeic voidings. These sick bees crawl off from the cluster and die in large numbers, and the colony speedily becomes so depleted in strength that a sudden cold snap usually finishes the work of destruction. A colony in such a condition should be supplied with proper food and warmth and be given as early as possible a good cleansing flight, and, usually, unless specific disorders of incurable dysentery are present, will recover. From the granular character of the diarrhoeic faeces of the bees so affected, it has been advanced by some that the winter supply of pollen should be removed. There is no more fallacious theory of practice abroad than this one, for it is entirely contrary to the natural habits, instincts and necessities of the bees. As winter approaches it is with great care that the bees gather and carefully protect with propolis an abundant store of pollen for winter and spring use; and a colony deprived of this supply of nitrogenous food, while it is able to live on

what pollen there is in normal honey, is unable to adequately feed its brood and regain its colony activities in the late winter and early spring months before new pollen is available. Honey contains enough pollen for the replacing of waste tissues in the adult bees, but the growing and developing larvae must have pollen in abundance in order to live and thrive. In fact, the bees will not start much brood unless pollen or its equivalent is available for the feeding of their young.

We believe that if these few essentials of winter practice be kept steadily in mind, successful wintering will become more and more sure, and that much will be contributed to the ultimate productiveness of each succeeding

summer's achievements in the honey harvest.

Los Angeles, California.

(The above article is not only worthy of a careful reading, but a careful *study* as well. Too much "guess work" is done in our preparation of bees for winter. Mr. Benton lays particular stress upon the importance of late breeding, which is a point well to consider. Another important point in preparing bees for out-door wintering, is to be sure and leave a space *between the packing and the cover*. Be sure that the packing does not come up right against the cover. I can well remember one winter when I did not understand this point, and allowed the packing to come up tight against the cover, and the next spring found me with a great many "very tame bees.")

A Cheap, Novel and Effective Way of Preparing Bees for Out-Door Wintering.

J. A. SPROAT.

SEVERAL bee-keepers have repeatedly said that bees could not be successfully wintered out of doors where it did not warm up enough to give them a fly every two or three weeks. I have kept bees twenty-two years, at one time wintering all in the cellar, but have gone back to the old method of out-door wintering. I seldom lose my colonies unless through some fault of my own.

The boxes I use for winter cases are made from shoe boxes that I get for ten cents each. It takes about four of them to make one wintering case. These cases are eight inches longer than the combined width of five hives, and seven inches wider. I have my cases face the south, and put but three inches of packing on that side, so that the heat of the sun will help raise the inside temperature on warm days. I consider this important as it enables the bees to

move their stores to the cluster. It is very seldom that I find a colony that has changed its brood-nest.

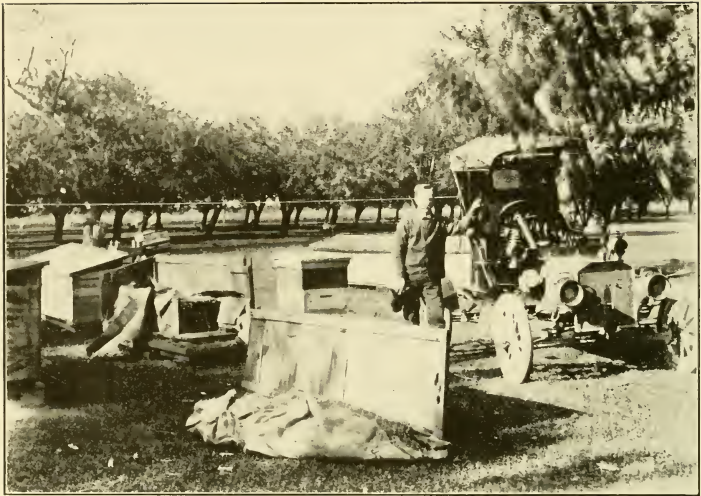
There is a space for four inches of packing in the rear, and the same amount on each end. If the box should be a little wide, I make the packing in the rear a little thicker, as I am particular to keep the front packing down to the three inches.

The bottom is made by nailing four pieces of $\frac{1}{2}$ in. strips across two 2x3 scantlings, and then nailing on the boards for the bottom. These boards may be anywhere from a half to an inch thick.

The sides, ends and cover are all hooked together with hooks made from heavy fence wire, using medium sized fence staples to fasten with.

PACKING.

In packing for winter a bottom board is placed behind a row of five hives. Two bricks or blocks are placed at each



J. A. Sproat's winter packing cases, open ready for packing.

end, and two in the middle to keep the bottom off the ground. It is then leveled with a pocket level as the hives are to remain in these boxes until fruit bloom, and longer if the weather remains cool.

The hives are now placed on this bottom board, as close together as they will go. The front is then set in place and the ends hooked to it. The bridges or little boxes to provide an entrance are next put in place. These provide an opening $1\frac{1}{2} \times 6$ in. long, leaving an entrance to the hive proper of $\frac{3}{8} \times 6$ in. The back side is now put in place and hooked, the staples being driven so as to hook rather tight, making the box quite rigid.

Now a piece of building paper is cut about nine feet long, and then cut lengthwise, making two long strips which are put next to the hives and folded over the ends and top, both front and rear. The strips will lack about four or five inches of coming to-

gether on top of the hives, leaving a space across the center of each hive for upward ventilation, and for the moisture to escape.

Now for the packing. Taking my two-wheeled cart made from binder-truck wheels so as to be low, having handles about five feet long, I go to a box that is full of chaff, and with a hook that is used for lifting the hives onto the wide bottom board, I lift up one end of the box of chaff and run the two-wheeled cart under. The cart is made wide enough so the wheels are outside of the box. This box of chaff is now wheeled to the box of hives, and the packing shoveled in with a scoop-shovel. When enough is in to fill level with the top of the hives, pressing it down firmly with the hands, two pieces of burlap, wider and longer than the box, are placed over the hives, lapping them about sixteen inches in the middle. More chaff is then shoveled in, until it is eight or nine inches thick on top.

Then the cover is placed on and fastened with hooks to keep it from blowing off, as it is light, being made of the same material as the sides ($\frac{1}{2}$ in. thick), and covered with paper. The cover does not fit tight on the ends, as I want the air to circulate freely over the chaff.

The reason for having the two pieces of burlap wider than the box, and enough longer to lap in the middle, is that when making an examination at any time, it can be taken by the four corners, and lifted off, chaff and all. In the picture shown, this cloth is on the ground near the back side of the box which was removed to show hives in position and paper that was folded over the hives and around the sides.

UNPACKING.

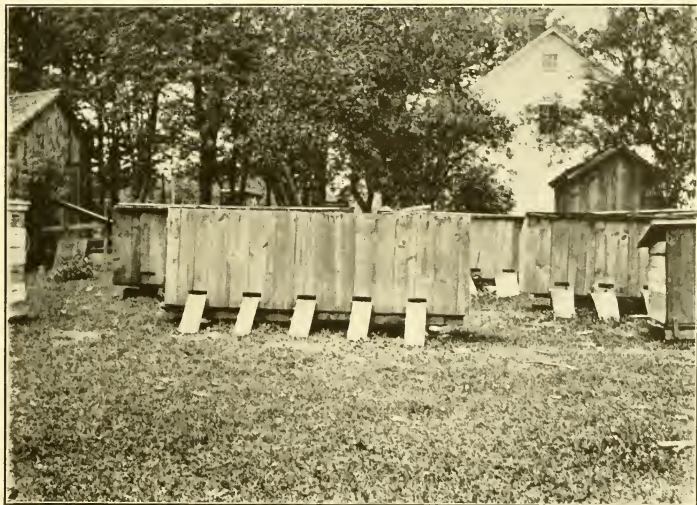
When unpacking in the spring, the burlap holding the chaff is lifted out and placed to one side. The hives are then lifted out and placed in front in

the same order that they were in the box. In lifting out two hooks are used, made of $\frac{3}{8}$ in. round iron, having a hook at one end and bent round for a handle at the other. They are a little longer than the height of the hive and bottom-board.

As soon as a box is emptied, it is loaded on the cart and drawn to the shade of some tree, and the chaff shoveled into it until full, and then another is placed by its side and so on until all are unpacked. The boxes and covers not needed to protect the chaff are taken down and all covered with one of the covers used in the winter, and there they stay until needed again in the fall.

PAPER MAKES POOR WINTER COVERING.

I have tried covering the tops of the hives with paper, using various kinds, but have discarded it as it does not allow the moisture to escape. I tried it until I was satisfied that the bees



The way J. A. Sproat's packing cases look when ready for winter.

did not winter so well. The combs would be damp and mouldy at the corners and back side of the hive.

My bees winter well, protected in this way. I have had them hang out at the entrance in the evening in April, ready for the third brood chamber (Heddon hive) during apple-bloom, and that when the hives were filled the previous fall with aster and golden rod honey, which so many say is fatal to good wintering.

Gasport, New York.

[I take it from the picture, although Mr. Sproat does not say so, that while

the bottom-boards are left on the hives, the covers are removed. I presume that a piece of burlap is placed next to the brood frames before the paper is put on.

I can see no reason why bees packed as Mr. Sproat above explains, should not winter well. It is certainly a cheap method for preparing colonies at out-yards for winter.

Mr. Sproat undoubtedly misunderstood in regard to golden-rod and aster honey for winter. There is no objection to this honey I believe, if the bees have had a chance to properly ripen it. The reason it is so many times not good, is that it is gathered in the fall, is rather thin, and the cool nights prevent a proper ripening.]

Something About Bee-Cellars. A Sub-Earth Ventilator Considered Necessary.

E. S. MILLER.

A BEE-CELLAR made of boards and posts may serve for a few years, but when one is permanently located and owns his own land it would seem better to build of stone or cement.

Three or four years ago I built a cement-block cellar, 14x20 ft. and 8 ft. deep, at a cost of about \$300. It was lathed and plastered overhead and filled in above with sawdust. It has a cement floor with a drain at one corner. The walls are plastered with cement and sand to keep out the water, since the cellar extends about eight feet below the ground-surface in the hardest kind of clay. There is a 2½ ft. trap door leading to the attic.

I winter here about 80 colonies, and, although, thus far, there have been no losses, the conditions are far from satisfactory. It is too damp. There is a strong odor and many dead bees are found on the floor. An underground ventilator will be installed before another year.

At another yard the cellar is built in a sand hill, and is made of brick with a brick floor. This cellar has been used for wintering bees for more than twenty years. Results were similar to those of number one until a sub-earth ventilator was put in. Conditions are now perfect. The air is practically as pure as that outside, and the temperature is just right. The bees are in excellent condition.

At my home yard the walls and floor of the cellar are made of cement. It is built in clay ground and has the honey-house above with a trap door 1½ by 3 ft. in the floor. I bought this place five years ago and used it as it was for two winters, leaving the trap-door open for "ventilation." The results were foul air, mouldy growth in the hives, many dead bees and a loss of about one-third of the colonies. Three years ago I put in an underground ventilator, and since that time have not lost a colony in wintering in that cellar. The conditions seem to

me nearly perfect. The air is dry and the temperature remains nearly constant at about 43 degrees.

I expect to make another cellar next year, and shall use cement blocks for the walls, and a cement floor, also eight inch cement tile for ventilators.

While bees may be carried through

winter with some success in a cellar with wooden walls, if in dry sand or other porous earth, it does not follow that the same measure of success could be obtained in clay, unless adequate ventilation is supplied from below, and the walls made waterproof.

Valparaiso, Ind.

How One Progressive Lady Bee-Keeper Winters Her Weak Colonies.

MATHILDE CANDLER.

THE VERY fall when the time came to begin to get bees ready for winter it was my practice to examine all the hives in order to determine if they had sufficient winter stores and were strong enough in bees to go through the winter. If I found a weak colony it was united with some other weak one or with a nearby hive, as advised in my bee-books and journals.

But now I now longer follow the old guide posts in this respect so closely. Indeed, I united few weak colonies. If I have any I try to winter them, for I think queens are too valuable to lose, as one surely would be, if united with another colony.

The fact that a colony is weak or does not come up to the average either in the amount of brood reared or honey produced is not always a sign that the bees are inferior or that the queen is a poor one. There are many agencies at work to hamper a weak colony or nucleus and retard its growth. The weakness may be due to a dearth of honey or pollen at a critical time, or to a scarcity of nurse bees or insufficient bees to cover brood and eggs; or, there may be too much ventilation, a draft through the hive, mice, ants or something else may have prevented normal growth and development.

Another season may find the harmful influence, whatever it was, removed and the colony often becomes strong and prosperous, storing a large amount of honey and may even be the best in the yard.

One season is not sufficient to determine the value of a queen. Of course, if we know her to be an old queen that has done poorly the season before, it would be best to destroy her and unite her bees to some other colony. Also, if the weak colony has a small, dark and runty-looking queen she should be destroyed. But I think it pays to keep all colonies having young, vigorous-looking queens even if they are weak, I would give such queens another chance the next season. They're very apt to make good.

I consider all weak colonies having young queens as nuclei and prepare them for wintering in one of three ways, using the one which seems most convenient. If it is fairly strong though not strong enough to winter alone, I place it on the nearest hive with its entrance turned in the opposite direction from the lower one. A good many bees will not find their new entrance now and will join the lower hive, thus making the weak colony still weaker; therefore, I reduce the entrance so that only one or two bees



Members of the National Beekeepers' Association, in convention assembled at Minneapolis, Minn., August 30-31, 1911.

can pass at a time, and remove all but two or three of the heaviest frames, placing division boards at each side and filling the empty space with planer shavings.

But if very weak I raise up the hive by putting an empty body or box under it. Then, at my next visit the bees have become accustomed to their elevated entrance and can be put on top of their neighbor colony. In this case I do not change the location of the entrance.

If I have two weak colonies or nuclei close together, I crowd them into a single hive body with a tight fitting division-board between them, cutting off all communication both above and below the frames. Or, if the weak colonies or nuclei are too strong to crowd into one body, I shove one of

them backward on its bottom board until there is an opening in the back. Then I place an excluder on it and put the brood-chamber with the bees to be united on top of this. Now I fasten all the parts,—cover, two brood chambers and bottom board, together with crate staples, so they cannot move or come apart, and then tip the whole thing on end backwards so that the opening at the back now becomes the hive entrance, and close up their former entrance with grass or a piece of lath.

The object in tipping the hive on end is to enable the queen from the lower chamber to accompany the bees when they go above as cold weather comes on. Unless this is done she will perish as she cannot pass through the excluder.



The nuclei whose entrances are opposite to that of the lower hive will probably build up into strong colonies in the spring. Of course, additional frames with honey must be given to supply the queen with combs and with honey for the brood. But when the upper entrance is in the same direction as the lower one the colonies do not be-

come very strong as too many bees enter the lower hives.

Weak colonies or nuclei will nearly always winter well when arranged in this way. However, I must remark that my hives set quite close together, in long rows. If they were farther apart or placed about irregularly it might not work so well.

Cassville, Wis.

The Best Method of Removing Honey from Unfinished Sections.

DR. C. C. MILLER.

“**W**HAT is the best method of removing honey from the combs of unfinished sections, that they may be used as ‘bait’ sections the next spring?”

The form of the question suggests that they are to be cleaned in the fall. That's right.

I've never been able to have satisfactory work done by having the work

done on or under a populated hive. The honey must be robbed. No trouble to get bees to rob in the fall. The trouble is that they will tear down the combs, sometimes chewing it into bits in their eagerness to get it from one another. The thing to do is to have them feel that there is plenty for all; in other words, not to let them be crowded on the comb.

There are two ways to accomplish this. First, the Miller plan. Pile the sections in supers, and allow an entrance for only one bee at a time. That makes them so slow getting in that they will not be crowded upon the combs. If there are many supers in the pile, allow an entrance to every 3 or 4 supers.

Second, the B. Taylor plan. This is the exact opposite, apparently, of the Miller plan, for the effort is to let the bees have the fullest access to the combs by opening them up and spreading them out as much as possible.

Which plan is better? That depends. The Miller plan may be used with safety at any and all times. The Taylor plan can be safely used only when the number of sections is large in proportion to the number of bees, perhaps as many as ten sections for each colony.

I prefer to use the Taylor plan when possible, as it makes quicker work. At

the close of the season there will be some supers with anywhere from one to ten or fifteen sections that have a little honey in each. These will be supers in which the bees have made a start without making much headway. Then there will be unfinished sections that have been taken from the outer rows of supers containing sections mostly filled. These last will be assembled in as many supers as will contain them. All the sections to be emptied will be put in the shop cellar. It will take some days to collect them, and the door will be kept closed. When all are ready the cellar door is opened, admitting the light, and also admitting the bees. Just at first it will seem as if the bees are not going to do much at emptying the sections. But within 24 hours the bees are going in and out in a dense stream, gradually thinning down after a day or two of roaring, although some bees will be going in and out for a week or more. Very likely a few sections will be somewhat gnawed, but not enough to amount to much. It is a great convenience to have them in the cellar as compared with stacking them up outdoors. If a rain comes up they are under cover, and they can be left until every section is thoroughly cleaned.

Marengo, Ill.

A Handy Wheel-Barrow for Carrying Hives of Bees.

CARL OPSATA.

MY bee-cellar is located in a side hill about forty rods from the apiary. Up to last fall I have been carrying my bees in on a hand-barrow, but this fall I had to put the bees in alone.

To use the hand-barrow was out of the question and to carry in over a hundred lives mostly 10 fr. that dis-

tance one at a time in the arms is no fun, especially as it's uphill all the way to my cellar.

Well, the bees had to be put in and I had to do it, so I just wheeled them in two at a time and I assure you it wasn't a bit heavier nor slower than the old way and what is more it didn't shake the bees up quite so much. The



A handy wheel-barrow used by Carl Opsata.

rubber tire and oak springs which the wheel is fastened to makes this barrow run very smooth.

The entrances were left wide open just as shown in the picture, yet only a very few bees flew out. In most of the hives the bees did not seem to know that they were moved at all.

SPRING PROTECTION OF TAR PAPER.

I make a practice of covering hives with tar-paper as soon as set out and I know it pays well.

It is as an easy matter to find out what the bees think of it. On a cold day just open one that is covered and see how nicely the bees are spread out over the combs doing their work in com-

fort, ready to give the inspector his dues if he be too inquisitive.

Then open one not covered and see how they are huddled together like a flock of sheep on a cold rainy day, too stiff to do anything but stand on their toes and shake their wings.

And then later in spring when hives are full of brood and the thermometer drops below freezing for a spell the satisfaction of knowing that the hives are air-tight at top is worth more than cost of paper and the backache we get in putting it on.

I want to express my thanks to you for bringing to our attention this valuable feature of spring protection.

Benidji, Minn.

Selling Honey. This Man has a Retail Trade that 1,500 Colonies Cannot Supply.

W. HICKOX.

IN selling honey, the local conditions are as much to be considered as in its production, and vary fully as much. The ability and

natural inclination of the producer enters into the case far more. One who has in him the material of a good "book-agent," the working up of a home

market is not only an easy task but a pleasure, but to him who is bashful and timid about meeting people to ask favors of them, it is such a task as will make him shrink from it, and probably cause him to be unsuccessful along that line.

Selling is an art, and to be successful one must have some ability along that line, and take pleasure in it. The man who hates the task and lies awake nights dreading it had better let some one else do the selling for him.

CO-OPERATIVE SELLING.

Co-operative organizations would seem best where there are sufficient small bee-keepers to unitedly make it an object for some man to handle their product. There is one great objection to such organizations as usually conducted, and that is the order in which each month's crop shall be sold. If in the order in which it is delivered to the salesman, some one must be the last, and another next to him. This, in case where the organization is state wide, often would carry the last lot over the season, and probably in the case of comb-honey, lose him the sale of his crop at any reasonable price, and even when some advance can be made on his crop, he may be seriously handicapped for money to carry on his business. This would not apply in cases where car lots are made up and sold at one time, but when a central store is maintained, and goods sold in such lots as may be demanded by the market. Some system in such cases would seem more equitable where all honey received should be graded, and sales pro-rated to all shippers at least once a month. There might seem to be some justice in serving the first man first, but there are often good reasons why one man may ship later than another. He may take more care in the preparation of his crop for market. He may be so located as to be unable to secure the necessary help at the right

time, delays in transit, and many others. Often a difference of a few miles may make a crop some days later.

A POTATO DEALER NOT A GOOD HONEY DEALER.

The regular commission dealers are as honest as any other class of men. But there is not much good in shipping *honey* to a *potato* specialist. He may sell a few cases, but he naturally is no judge of quality, and also naturally likes to favor some good potato customers with a little honey cheap, so it is a chance if the buyer does not set the price. But in towns of any size there are commission men who make more or less of a specialty of honey, and if these men have not a large stock on hand, fair prices, and honest treatment is assured, and returns are likely to be as good as from any other source. The writer has sold many tons this way, and never had cause to complain. In one or two instances small lots went wrong, but this was his own fault in not first finding the conditions before shipping.

Extracted honey is more difficult to sell through commission firms, generally, but there are a few firms who have men posted in this line, and have a good trade in it at good prices.

In time a line of customers can be secured for a considerable quantity of honey, by simply asking a customer to tell his friends who like honey, where they can get some like his, if he finds it to his liking. We have often sold five hundred to a thousand pounds in one neighborhood in that way, and like the "endless chain" it keeps spreading year by year. Then years ago we could hardly sell the product of 300 colonies as we were just beginning and were unknown. Now 1,500 colonies do not begin to supply our orders for a season's crop, cash sales. Our customers are our friends, and though we know them only by name, often, and sell to them but once a year, we consider them

one of the best assets of our business. This is simply our method of selling because the writer likes it. But another man would not be able to handle it because it would not appeal to him. So let each man study out the method best suited to himself: his locality, and his markets, and when he has found the best way for his own interests stay by it.

Rosebud, Mont.

[Mr. Hickox strikes a very important point in the above article, and that is, if honey is consigned to a commission man, that one should be selected who handles honey in sufficient quantity to warrant him in giving proper attention to that branch of his business. Many times I have seen comb honey piled up in a commission house, amid such dirty surroundings that one would have to be very much in need of honey to be willing to pay the market price for it.]



EDITORIAL

Bee-Keepers' Review

Published Monthly
E. B. TYRRELL, Editor and Publisher
 Office—230 Woodland Ave., Detroit,
 Mich.

Entered as second-class matter, July 7, 1911, at the post office at Detroit, Michigan, under the Act of March 3, 1879.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Advertising Rates on Application.

Michigan Bee-keepers' Convention,
 Saginaw, Mich., December 13 and
 14. Program later.

"You'll never discover where you are wrong if your attention is continually devoted to the shortcomings of your fellows. The job of minding your own business, of mending your own faults and arranging your own affairs, is a full-sized, twenty-four-hour-a-day task for any one."

Mr. Hilton's Supply Business.

The supply business of the late Geo. E. Hilton of Fremont, Mich., has been taken over and will be continued by M. H. Hunt & Son, of Lansing, Mich. We assure the customers of Mr. Hilton that they will be well taken care of by this firm.

Buckwheat Hulls for Packing.

One of my subscribers, Mr. A. W. Smith, of Parkville, N. Y., writes as follows: "Why is it that the bee-journals do not speak of buckwheat hulls as a packing for bees? The bee-keepers around here have used buckwheat hulls almost exclusively for the past 25 years, and like them better than any other packing, but I do not read anything about them as a packing in bee-books or journals."

Wanted—The Names and Addresses of Every Bee-Keepers Association in the United States and Canada.

The Review intends to get and keep a list of the bee-keepers' associations of this continent. Many times some subscriber writes for information concerning an association in some partic-

ular location, and without this information it can not be given. I will ask the secretary or president of any association, regardless of whether you think I have your name and address or not, to send me a list of all your officers and their addresses. When this list is compiled it will be available to any subscriber of the Review.

Articles Wanted on Practical Co-operation.

The winter months will soon be with us, and there is no better time to discuss practical co-operation. All over this land of ours are springing up attempts at co-operation, both among the bee-keepers and farmers as well. Some are successful while others are not. Let us have a few good articles on this subject. Not so much what can be done, but what is actually being done now. Even the failures are valuable in that they teach us the obstacles to be encountered. Just now the National is considering an important move along this line, and this subject should be a live one to every progressive bee-keeper, big or little. Let me hear from you.

Our Reception at Minneapolis.

Much credit is due the Minnesota Bee-Keepers' Association, and both the Minneapolis and St. Paul Commercial Clubs, for the splendid reception given the visiting bee-keepers. We were met at St. Paul by the Minnesota Bee-Keepers and conducted to the Hotel Vendome, which had been selected as headquarters. The Minneapolis Commercial Club presented us with the use of the G. A. R. room in the Court House for our meetings, and then gave us, under the auspices of the Minnesota Bee-Keepers' Association, a free trolley ride through the streets of Minneapolis, and to St. Paul. We visited the celebrated Minnehaha Falls, and

from there went to the club rooms of the St. Paul Commercial Club, where we were given a four-course chicken dinner. A visit to the Capitol completed the trip.

There is no question but that every bee-man or woman in attendance at this convention went away a booster for Minneapolis and St. Paul.

Mr. E. C. Porter.

Just as we were going to press with the September Review, we received notice of the death of another prominent bee-keeper, Mr. E. C. Porter, of Lewiston, Ill. He will be known by his connection with the sale of the Porter Bee-Escape, an invention of his father, Rufus Porter.

Mr. Porter was born June 10th, 1857, and died August 6th, 1911. He was unmarried, and a man of excellent character and sterling worth. He was an ardent lover of nature, and took great pride in the culture of choice varieties of plants and fruits.

Our sympathy goes out to his relatives and friends.

National Convention Notes.

Dr. Phillips, of the Department of Entomology, stated at the Convention that the de-queening method for the cure of European foul brood has been the cause of the loss of thousands of colonies.

Dr. Phillips says that a great many reports of bees killed from spraying fruit-trees while in bloom, upon investigation prove to be cases of foul brood where the owner did not know the difference.

One member of the National advocated licensing bee-keepers. He argued that such a course would keep out the man who paid no attention to his bees, and thus prevent the spread of

foul brood from such sources. The license fee could be used to assist in caring for inspection expenses.

The bee-keepers certainly received a royal welcome in Minneapolis. Even the hotels seemed imbued with the "glad hand" spirit, and across one end of the dining room of the Hotel Vendome, which was selected as the bee-men's headquarters, was hung a sign reading, "Welcome, Busy Bee Association." Honey was also on the bill of fare.

At the National Convention, Mr. Hamlin Poor, of Bird Island, Minn., advanced a good argument to use with State Legislators when working for foul brood laws. He said that instead of trying to show up the value of bees to the bee-keeper, it is better to show up their value to horticulture, and that the valuable fruit crop depends to a large extent upon the welfare of the honey bee. Good argument, that.

Manager France explained a method of keeping bees from water tanks, by simply covering the tanks with boards, cutting a hole in the center for the stock to drink from. He explained that bees would never bother a water tank unless they could get at *the edges* to drink. Another plan where bees are bothering by getting water from the tank overflow, is to conduct that overflow some distance from the tank by the use of an iron pipe. Good ideas, both.

Standardizing Our Packages.

The question of standard packages is an important one. If we could have standard sections, standard shipping cases, standard hives, standard extracted honey packages, a great saving would be accomplished. Machines could be set to manufacture the standard. Jobbers could keep a supply

of but one thing, the standard. Bee-keepers could order together, or buy from one another in case of necessity, and not find themselves in the predicament mentioned at the National, where several bee-keepers found themselves out of sections, but learning of one bee-keeper who had an over supply, went to him and found them *all a different size*.

The question is, how shall this be brought about? Not by the bee-keepers, for they can't agree on what they want. Not by the supply men, for they naturally would be partial to their particular size and make. Not by the honey-jobber, for possibly he has built up a trade in some particular size. By whom then can we look for the solution to this perplexing question? *To the whole lot of them combined.*

It is stated that Mr. Souther, the well-known steel expert, was given the task of standardizing the formulae and heats, etc., for the best kind of steel to be used for specific purposes. Thus all other engineers were able to arrange and specify formulae that they could be sure would produce steel that would meet any requirements of their specifications.

Mr. Southers gave his brother engineers this information freely. In turn some gave their special knowledge of carburetors, others of other parts. Steel tubing for instance was originally made in three thousand sizes. It is now made in less than three hundred. Standardization of such things, through the co-operation of the automobile engineers, lessened detail, lessened loss, lessened costs, work and worry, and has produced a wonderful saving for the automobile industry.

The bee-keeper, the supply manufacturer, the jobber, and the honey-dealer would all welcome standard sizes. No one can get them alone, but a delegation from all, coming together with facts and figures, could work out this

problem very easily. The Review is willing to do its part towards bringing such a delegation together. Does the plan meet with response?

The New Constitution.

When a business outgrows its quarters, it is generally unsatisfactory to try and fix over the old building. As a rule a move to new and adequate quarters is desirable. The same is true of its business system. Many businesses get along all right with a certain method while small, but have to have a complete change of system when they grow larger.

Such a condition now confronts the National Bee Keepers' Association. Its present constitution and laws are inadequate. It has outgrown its house, so to speak. It requires a new system. This is a compliment to the old officers who have brought the National to a point where such a change is necessary. Personally I can claim none of this credit, as I have held office but one year, but Manager France and President York are deserving of full credit.

At the convention this question of a new constitution was brought up, and fully discussed, both in the committee

room and by the convention as a whole. No one questions its need, and when the new constitution was proposed it was adopted with practically no opposition. In fact the only discussion that occurred was on certain sections, many of them going through without a dissenting vote.

Briefly the new constitution provides for a National Association with branches all over the United States and Canada. Each branch will elect a delegate to attend the National Convention, and these delegates will make and change the laws. The National Conventions then will be conventions of delegates instead of individual members as at present. In this way a powerful organization can be built up, and all the local associations assisted. Membership in a branch means membership in the National.

This constitution will be placed before the members in printed form in November, and we shall be surprised if it is not adopted. It is the most important thing that has come before the National members in years, and should receive the attention of every member. Be sure and vote on it, one way or the other.

SELECTED ARTICLES

AND EDITORIAL COMMENTS

Something About Bee-Hives.

After advising the use of ten-frame hives, and warning against the desire to invent a new bee-hive, Mr. E. D. Townsend gives in the *American Bee-Journal* this excellent advice to beekeepers:

It's the man, not the hive, that produces tons of honey, annually. "You

cannot know too much about your business" is as true today as ever. If you are not getting good, fair crops of honey—as good, or better than your neighbor, who is in close proximity to you—do not lay it to your hives or location. In other words, use your brains; they will help you out, take my word for it. Don't invent a new hive, for it won't help you any.

A Good Report.

The Hudson Miner, of Hudson, Wyoming, boosts that location for bee-keeping as follows. It fails to state, however, whether these were natural swarms or artificial. It also fails to say whether the twelve came from the one, or whether from the one and its increase:

Geo. E. Burch, who has the reputation of being one of the best bee men in this part of the country, told us this week that when he started this spring he had only one stand of bees. Now he has saved twelve stands from that one and there are more to follow. Pretty good for one season, isn't it? It has always been said that this is the best country on earth for the bee industry and we are inclined to that belief ourselves.

The Honey Crop in England.

While we on this side of the water are lamenting a short honey-crop, our brothers across the way are burdened with a heavy crop, but are dissatisfied with the prices offered. A correspondent in the *British Bee Journal* says:

The average apiary has produced a good crop of the precious "nectar of Heaven," and that not only as regards weight, but quality also. I have not yet seen a single uneatable section or extracted an ounce of unsaleable honey, and I must own up to heartily singing the Doxology at the thought of it. But the spirit of thanksgiving was less ardent when I received the handsome offer made by a London firm of 6s. per doz. for sections, and 50s. per cwt. for extracted honey, both, of course, of best quality, and it brought the question to my mind—Why sell prime honey, the choicest of all food, at one-third the price of salted butter? Why sell honey at a price that covers it with contempt as compared, for instance, with bacon?

Mexico Bee-Men are Evidently Alive.

This is shown by a prominent four-heading article in the *Roswell Morning Star*, of Roswell, Mexico, giving a list of prizes offered for exhibits at the Products Exposition, which was evi-

dently managed by the bee-men themselves. We read in part as follows:

H. C. Barron, at Hagerman, secretary of the Bee Men's association, and A. J. Crawford, and R. B. Slease, members of the Bee Men's display at the Roswell Products Exposition, have just completed their list of classes and prizes.

The Association has not appointed the judge. This will not be done until next month. A disinterested man will be named.

Daily demonstrations by A. J. Crawford with full colony of bees in wire cage will show all the manipulations of the apiarist.

The finest display of bee supplies ever brought together.

Ribbons will be awarded on all articles of merit, but cash prizes will be paid only when there is competition.

A public display—daily from a float showing the accurate, and practical methods adopted by the keepers in extracting honey from the comb and preparing the same for market.

Shipping Honey From Foul Brood Localities.

J. L. Byer says in *Gleanings in Bee Culture*:

British Columbia has the strictest foul-brood act yet enacted, in that it gives power to hold in quarantine any bees being shipped in, even if coming from the sister provinces. It seems to the writer that this is reasonable; and why should it not apply to *honey* being shipped in from infested localities?

But how would you propose to stop it, Friend Byer? Suppose such a law was passed, how would you *know* whether the honey was free from the disease or not unless you knew right where it came from? And wouldn't bee-keepers be more wary than ever about having inspection, if they knew it meant the loss to them of their honey crop if foul brood was discovered among their bees?

Suppose, Friend Byer, that some bee-keeper near you, with two or three colonies of bees, allowed your bees to get foul brood by robbing out his diseased colonies. With the disease in your

apiary what would you do with your crop of honey, perhaps thousands of pounds, if there was a law preventing you to sell it. No, I don't think we want such a law, just yet.

The Late W. Z. Hutchinson.

It has given me a great deal of pleasure to read in the several bee-publications the many words of tribute to the late Mr. Hutchinson. In *Gleanings in Bee Culture*, Mr. J. E. Crane says:

Much has been written of our friend W. Z. Hutchinson, since his death, not too much, however, for he was not only the kindest husband and father, but the friend of every bee-keeper, and I have wondered many times since his death why we were all so much attached to him, so that his death has seemed like a great personal loss. Was it not the sweet Christian spirit that pervaded his whole life, and controlled his relations with all with whom he came in contact?

It was my pleasure to become intimately acquainted with Mr. Hutchinson during my early bee-keeping experience. My home was but nine miles from his, and many were the times that I called on him to help me solve my beginner's problems. Never was he too busy to do this, even before I was a Review subscriber. Mr. Crane is right, he was the bee-keeper's friend, and I don't believe there is another man who has done more to place bee-keeping on the advanced plane it occupies today, than has Mr. Hutchinson.

Outdoor Feeding to Call Off Robbers During Late Extracting.

For years we have been taught to not expose sweets of any kind at a time when bees were not gathering honey from the flowers. Of late however, the advice is being reversed, and we are now told to feed for late extracting. The different view is taken from a better knowledge of *how* that feeding should be done, and is a point well worthy our attention. In *Gleanings in Bee Culture*, we read:

During the late extracting periods, outdoor feeding of honey thinned down to the consistency of thin nectar will stop all the robbing nuisance. We say *thin honey* because no one would advocate feeding sugar syrup which possibly might go into the combs and then into the extractor.

It is wonderful how little of sweetened water will keep a whole apiary on its good behavior. Actually, 5 lbs. of sugar with nine times its weight of water will keep a whole apiary in good humor all day; and we venture the statement that as many as a dozen hive-covers can be taken off and left off for an hour or more without a robber in sight. We would not, however, advise anybody to try out a scheme of this kind, and then go away and leave the apiary, for there *might* be trouble.

That Shipping Case Again.

Concerning the shipping case, *Gleanings in Bee-Culture* says:

Mr. R. B. Slease, of Roswell, New Mexico, a bee-keeper who has had some twenty years' experience in shipping honey, votes in favor of the 24-lb. single-tier shipping-case with two-inch glass. He says the trouble with the double-tier case is that it is too nearly square; that express men are "just as liable to chuck it down on its side as any other way." "The single-tier case," he goes on to say, "will always go flat or on one end." He does not favor three-inch glass, because that width weakens the case too much.

See here, Mr. Slease, why do you want to give an expressman a chance to "chuck it down on its side?" Don't you know that honey should *never* be shipped in single cases? Don't you know that shipping honey in single cases is one of the reasons why we are paying such high freight and express rates now?

Manager France stated at the National Convention that in his work before the Western Classification Committee to get a lower rate on honey, he found that *80 per cent of all damage claims were paid for single case shipments*. Mr. France and his colleagues in this work have secured a second-

class rate for honey shipped in carriers, in that jurisdiction.

I feel that the plan of single case shipments should be condemned, whether single or double-tier cases are used.

The Box-Hive to be Banished from Colorado.

News Notes, published by the Colorado Agricultural College, contains a report of their new foul-brood law, and a notice for all bees to be changed from box hives to movable-comb hives. This law goes into effect July 1, 1912.

We do not envy Mr. Wesley Foster, state inspector, his position for the next few years, and we shall watch with interest the working of the new law. We read:

The bill providing for the inspection of the apiaries of the state for the purpose of controlling foul-brood and other diseases of the honey bee, is now in force.

All but \$2,000 of the appropriation for carrying on this work was vetoed, so that it will be impossible to do more than pay for the supervision of the work at state expense.

Mr. Wesley Foster, secretary of the State Bee-Keepers' Association, has been appointed deputy inspector in charge of the work. The work will be taken up first in those counties that will co-operate by setting aside funds enough to enable a county inspector to assist Mr. Foster in carrying on the work.

As a measure for the eradication of American foul-brood all colonies located in hives, boxes, kegs, gums or skeps the combs of which are not movable, must be transferred to movable comb hives by July 1, 1912.

Box hives are the most fruitful sources of contagion to all bees in the community, and for the protection of the industry, this notice, with ample time in which to transfer the bees is given.

Bee-Journalism in America Today.

You will pardon me for clipping the following from *Gleanings In Bee Culture*. I do not so much because of what it says concerning my work with the

Review, but because of the spirit shown:

"There never was a time when there was a better and cleaner lot of bee-papers than are being published now. Every one is worth reading. Even if one has only a few bees he will see something in one of the bee-papers that will save him ten times its cost for one year. In this connection it is a real pleasure to speak of the excellent work now being done by the new editor of the *Bee-Keepers' Review*. When Mr. Tyrrell first took up the work we felt very sanguine that he would succeed. The late issues of our valued contemporary go to show that the *Review* is fully equal to, and in some respects ahead of, its former self, and that is saying a good deal, for Mr. Hutchinson knew, if any one did, how to make a readable, attractive, and beautiful magazine on bees."

I fully realize how the A. I. Root Co., with the power behind it, could have made my work of continuing the Review very difficult, either by critical comments on the same or by totally ignoring me. It did neither. How different is this from the course taken by many business institutions today. Read this from one of the Review subscribers, a president and general manager of a large electric railway company:

"My interest in bee-keeping is only that of an amateur but I like the hobby and the best part of it is the pleasure of reading the bee papers and knowing that there is one business in this world where competitors are not constantly snarling and snapping at each other, and where honesty and character are reflected in the written pages, as they are in all of the bee papers. To a man in my business and more or less public position, who is being continually nagged and attacked by reasonable and unreasonable foes, the bee industry and the attitude reflected in its papers is as a fresh breeze to the traveler in the sands of the desert."

Let me say further, that not only is this spirit found among publishers of bee-journals, but I find it extends to the dealers in bee-supplies, and down

among the bee-keepers as well. The encouraging letters that have come to me from every quarter of the United States and Canada, and across the water as well, have meant much to me in my new work. And let me add that I have yet to receive the first wail of complaint. I thank you all, brothers.

Disposing of the Honey Crop.

In an excellent article under this heading in *American Bee Journal*, that veteran bee-keeper, C. P. Dadant, says among other things:

A housekeeper who hesitates to put 20 cents in a glass jar containing a single pound of honey, might readily buy from the producer a 10-pound can at a little over half the price per pound—say 12 cents. The producer who gets 8 cents per pound, in bulk, for his honey, shipped to a large city, would net over 10 cents per pound for the same honey sold to his neighbor, and the amount consumed ultimately would probably be doubled, thus increasing the demand largely, and creating a taste for the product instead of canceling it, or frightening it away.

That is a point well taken. For several years I have decided that bee-keepers were as a rule catering too much to small glass packages. What honey I now retail goes to the consumer in a ten-pound package. While it is a little difficult sometimes to sell the first pail, there is no trouble with the second, and the best part is that I very seldom have a request for a smaller package. Many customers order two to four pails at a time. I tell them that it costs just as much to take a five as a ten-pound order, that it costs just as much to deliver it, and that after all the consumer pays the bill, so it pays them to use the larger package.

Mr. Dadant also says concerning selling by sample:

You will say that you are not a peddler, and do not wish to run around with your goods. It is not at all necessary to peddle. Carrying honey around

in order to sell it is the worst possible method. We sell by sample, always, and never haul honey about unless it is already sold.

Now, Mr. Dadant, I go you one better on that, for I don't even use a sample. No, sir, just call and take the order with the understanding that the honey must give satisfaction at time of delivery. Any one can carry a good sample, but it is what is delivered that counts. In a great city like this, irresponsible hucksters practice the plan of calling at the houses, *away ahead of their wagon*, show a handful of potatoes, apples, etc., take the order, and then deliver something far inferior. For this reason the sample plan is not looked on with much favor. Besides the better salesmen are not using samples as they used to, but give it to be distinctly understood that the goods must give satisfaction when delivered or no sale.

This excellent article is concluded with this good advice:

Conclusion: If you want to see honey prices more firm, try home sales; not one time, but every year, regularly, with a sufficient addition to the price you would secure to pay you amply for the extra labor, and you will be astonished, in a few years, with the result achieved. This is not idle talk; it is my own experience, acquired from a practice of considerably over 40 years.

SWARTHMORE'S PEDIGREED GOLDENS

Queens from the well known SWARTHMORE Apiaries of the late E. L. Pratt. The brightest *hustlers* and the most *gentle* pure strain of Goldens in the United States.

The Swarthmore Apiaries, Swarthmore, Pa.

7-11-31

The flavor of richest apple cider
A table delicacy that has no equal
A beverage that refreshes and invigorates
The strongest health germs in Nature

Made from Honey and Water

In any kitchen, at any hour, at a cost of 2 to 4 cents per gallon. Process and right to make it two years. 25c

C. W. Dayton, Chatsworth, Calif.

IT PAYS TO USE
DADANT'S FOUNDATION

**A. G. WOODMAN OF GRAND RAPIDS,
 AGENT FOR MICHIGAN.**

**DADANT & SONS
 HAMILTON, ILLINOIS.**

Honey Honey Honey

**We Want to Buy
 We Want to Sell**

We are always in the market for Honey, both comb and extracted, if quality and price justify. Should you have any to offer, let us hear from you. If extracted, mail sample, state how it is put up and lowest price; if comb, state what kind and how packed.

If in the market for honey, write for prices.

Cans Cans Cans

We have a surplus of second hand, five gallon cans, two to a case, as good as new, used but once. Offer same, while they last, at 25c per case f. o. b. Cincinnati. Order quick, if you want any.

C. H. W. WEBER & CO.

2146-48 Central Ave. CINCINNATI, O.

MEXICO AS A BEE COUNTRY

B. A. Hadsell, of Buckeye, Arizona, one of the largest bee-keepers in the world, has made six trips to Mexico, investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated 32-page booklet describing the tropics of Mexico as a Bee Man's Paradise, which is also superior as a farming, stock raising and fruit country, where mercury ranges between 55 and 98. Frost and sun-stroke is unknown. Also a great health resort. He will mail this book free by addressing

B. A. HADSELL, Lititz, Pa.

WE want to buy white comb and extracted honey in car lots or small shipments. We pay cash on arrival. Mail sample extracted and quote price you expect to get for it. We will mail empty bottles on request.

E. R. PAHL & CO.,

Milwaukee, Wis. Established 1894.

WANTED

Early orders for the Old Reliable Bingham Bee Smokers. Address

T. F. Bingham, Alma Mich.

How You Can Help the Review and Get Paid for Your Trouble.

The best kind of an advertisement that a publication can have, is a good word from a satisfied subscriber to a friend. I know that the REVIEW must have a lot of satisfied subscribers from the fact that such a large number of them have been taking it so long.

Now I am going to ask every live subscriber to help me boost the subscription list between now and January first. I am asking you *right now* for two new subscribers from your neighborhood. I am sure they are there, and that you can get them. It is only a question of "will you?" and I think you will.

Use These Arguments.

Take a copy of the REVIEW, and go right over to that friend or neighbor who keeps bees. Tell him how you value the paper, and how oftentimes one article is worth many times the subscription price. If he says that he has but a few colonies of bees and doesn't read much, tell him he doesn't have to read much—that if he gets any information during the whole year that will enable him to get an extra eight pounds of honey, that it pays for the REVIEW. More than that, tell him if he has any boys or girls who will get interested in bee-culture from reading the REVIEW, that it may mean an additional revenue from the farm, and may also be the means of *keeping that boy or girl from an unnatural city life*. Can he afford to invest a dollar for the welfare of his children?

For Beginners, Too.

If he says that he is just a beginner and that the REVIEW is for the advanced bee-keeper, tell him that is where he is mistaken. The REVIEW is for the advanced bee-keeper, but *for the beginner also*. Tell him if he wants to learn how to keep bees, that he wants to get right up close to the big fellows who are making a practical success of the bee business, and that is just the kind of fellows who are writing for the REVIEW. If he thinks the bee industry is a small affair, tell him Uncle Sam estimates that there are at least 800,000 bee-keepers in the United States.

Balance of Year Free.

Last, but not least, tell him you are going to give him the balance of this year free, providing he subscribes right now for 1912. Also tell him that he can help you by subscribing now, for the editor and publisher has offered to extend your subscription one year if you can help him boost that subscription list by sending in but two new subscribers for 1912. Ask him if he will be one of the two, providing you can get the other. Don't be afraid to tell him what you get out of this—it won't hurt, but will help you get him. He will appreciate the confidence.

That's the Proposition.

Send in two new subscribers for 1912 at once, and I will send the new subscriber the paper to the end of 1912 for his payment, and I will extend your subscription one year for your trouble. Subscription price to collect is the same as applies to your locality, given in editorial department of this issue.

THE BEE KEEPERS' REVIEW,

230 Woodland Ave., DETROIT, MICHIGAN.



"If goods are wanted quick, send to Pouder."

BEE SUPPLIES

Standard hives with latest improvements, Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER HONEY JARS

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POUDER, Indianapolis, Ind.
859 Massachusetts Avenue.

"falcon"

Hives and Supplies

**Less 6% in September
and October.**

Six per cent discount for buying six months before actually needed is at the rate of 12% interest per annum. No small saving!

A strong appeal to the large bee-keeper who has many supplies to get ready and does not want to lose any part of his honey crop on account of the delayed order. And this saving on FALCON QUALITY goods which are made to stand the rigor of many years!

Put this down in your note book for every year, but send your list of 1912 wants for quantity quotation today.

W. T. FALCONER MFG. CO.

Factory, **Falconer N. Y.** OR **117 N. Jefferson St. Chicago, Ill.**

MARSHFIELD GOODS

Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

Hives and Shipping Cases are dandies.

Ask for our catalogue of supplies free.

MARSHFIELD MFG. CO.

Marshfield, Wis.

Large quantities of comb and extracted

HONEY WANTED.

Write us for prices, stating quantity and grade:

American Butter & Cheese Co.
612-14 Broadway Cleveland, Ohio

FOR SALE: 68 colonies of bees with supers. **CHARLES C. SCHNEIDER**, North Detroit, Rt. 2, Box 159, Mich.

FOR SALE A bee-hive factory with one acre of ground. The factory has 2500 square feet of floor space, and machinery sufficient for making hives and portable poultry houses; two small groves on the place; 35 fruit trees and abundant small fruits; a four-room house; business growing; electric power; all modern conveniences; close to the cars and school, and 40 minutes to the city of Portland, Oregon. Write for full description. **THE BEE HIVE**, Box 167, Lents, Oregon.

We Want More

White Comb Honey

We are well pleased with our business this year. We have purchased a nice lot of honey from Review readers, and it has been of excellent quality, but we need a good deal more to supply our trade.

Tell us what you have, now.

Comb honey should be sold NOW. Don't wait for cold weather, for there is danger in shipping then. Prices are as good now as they will be, and there is nothing gained by waiting. We expect to hear from you at once.

American Butter & Cheese Co.

31-33 Griswold St.

DETROIT, MICH.

RASPBERRY HONEY

All the readers of the *Review*, who have bought honey of us in the past, need no samples before buying. They always get the same thing, honey of the very first quality. It is all left on the hives until it is thoroughly ripened. It is thick, rich, and delicious. Put up in new, 60-lb. tin cans. Price, \$6 per can. Large size sample, 10 cents. The 10 cents may be applied on first order sent. Send all orders to

ELMER HUTCHINSON
Pioneer, Mich.

**THIS BRAND MEANS
BEE SUPPLIES
Scientifically Made**

OUT OF

Good Material

TAKE NO OTHER



**30 DISTRIBUTING HOUSES
SEND FOR FREE ANNUAL
1911 CATALOG**

GIVING NAME OF NEAREST ONE

G. B. LEWIS CO.

WATERTOWN, WIS.

Honey Quotations

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy and No. 1, white comb honey, 17c to 18c. Light amber, 16c. Amber, 15c. Fancy white extracted, 11c to 12c. Light amber, 10c. Amber, 9c. Wax, 30c.

BLAKE-LEE CO.,

Sept. 19th.

4 Chatham Row.

NEW YORK CITY—Comb honey, demand good. New crop white comb now arriving, and finds ready sale at from 16c to 17c per pound for fancy white, 14c to 15c per pound for No. 1, and 13c per pound for No. 2. We would advise shipping now, and not wait for higher prices later on. No arrivals yet of new crop buckwheat and not much demand. This will probably sell at around 10c to 11c per pound for fancy, and from 9c to 10c per pound for No. 1. Extracted in good demand, and former prices are maintained. Beeswax, quiet at 30c per pound.

HILDRETH & SEGELKEN,

Sept. 20th.

82 Murray St.

CHICAGO—The supply of comb honey on this market is not equal to the demand at this time, and there is a strong feeling that fancy comb honey is not too high at 18c per pound, with No. 1 grades running at 16c to 17c, also being readily taken. The dark grades, however, quite often drag at prices ranging from 12c to 15c.

Extracted is accumulating. Basswood and clover grades bring 9c, other kinds of white 8c to 8½c, amber grades 7c to 8c, according to color and quality. Beeswax sells on arrival at 31c to 32c.

R. A. BURNETT & CO.,

Sept. 19th.

173 West South Water St.

KANSAS CITY, MO.—The receipts of honey are more liberal both comb and extracted; the demand fair. We quote No. 1 white comb honey, 24 sections per case, \$3.50; No. 2 white comb honey, 24 sections per case, \$3.25; No. 1 amber comb honey, 24 sections per case, \$3.25; No. 2 amber comb honey, 24 sections per case, \$2.75-\$3.00. Extracted white per pound, 8½c-9c; extracted amber per pound, 7c-8c; beeswax per pound, 25c-28c.

C. C. CLEMONS PRODUCE CO.

Sept. 21st.

CINCINNATI—The demand for comb honey is very good, and is selling by the single case to the retailer at from 16c to 17½c per pound, according to quality. In a jobbing way, for Western comb honey we are getting \$3.75 a case, \$4.00 by the single crate.

Extracted honey is rather plentiful; the amber is selling at from 6c to 7½c per pound, according to the quality purchased. For strictly fancy water white table honey, we are getting 10c and 11c a pound.

We are paying 28c and 30c a pound for choice, bright yellow beeswax, delivered here.

THE FRED W. MUTH CO.,

"The Busy Bee Men."

Sept. 21st.

51 Walnut Street.

TOLEDO—There is now quite a brisk demand for both comb and extracted honey, and prices are quite firm. Fancy comb is selling in a retail way at from 16½ to 18c per pound; amber grades from 14c to 15c, depending on condition for market, etc.; extracted white clover is bringing 10c by the single can or case, amber grades from 7c to 8c, depending on quality and source of production. Beeswax is steady, and brings 30c to 33c per pound.

Buyers are not anxious to buy honey owing to the high prevailing prices and they look for honey to decline as the season advances, and from quotations from the western shippers there seems a tendency to decline, as they have been unable to move their stocks at the prices asked. Owing to high prices of staple groceries and food stuff we do not look for any big sale on honey this year, and producers holding their crop for big prices will be disappointed, as now is the time to sell.

S. J. GRIGGS & CO.

Sept. 29th.

CINCINNATI—The market on comb honey is very firm. We quote No. 1 white to fancy at 16½c per pound. Off grades not wanted. Extracted, fancy white sage, 10c in 60 pound cans, two cans to a case; amber in barrels, 7c and 7½c. Beeswax in fair demand at \$33.00 per 100 pounds. The above are our selling prices, not what we are paying.

C. H. W. WEBER & CO.

Sept. 19th.

DENVER—We quote our local market as follows: No. 1 white per case of 24 sections, \$3.35; No. 1 light amber, \$3.15; No. 2, \$2.95; white extracted 8½c to 9c; light amber 7½c to 8½c. We pay 25c cash and 27c in trade for clean yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS' ASSN.

Sept. 23.



ITALIAN QUEENS

Having purchased the bees and queen-rearing business of J. L. Flajen, Alma, Mo., we are prepared to furnish Golden and Leather Colored Italian Queens of superior quality in quantities. Write for prices.

C. E. WALKER MERC. CO.

Kansas City, Mo.

"The Car Ahead"



A practical car for busy bee-keepers



Here's just the car you want for those quick business trips—and to get the most enjoyment out of the hour or so that you and your family may have after the work is done for the day.

The Cartercar is most reliable because of the extremely simple and strong construction. No matter whether rain or shine it is always ready for the word "Go."

When you are in a hurry the Cartercar can be depended on to get you there double quick every time. If it is just pleasure that you seek, the car rolls along easily and noiselessly.

The friction transmission of the Cartercar makes it the most reliable yet the most enjoyable of all auto-

mobiles. This transmission is so simple that it does not get out of order—and it eliminates all jerks and jars in starting.

There are any number of speeds at your command. All are easily and noiselessly controlled by one lever. The farther forward the lever is pushed the faster the speed. When the lever is pulled back the speed is reversed.

The chain-in-oil drive is noiseless. The case is dust and grit tight and permits the chain to operate in oil, thus eliminating almost all wear on the chain.

The Bee-Keeper who drives a Cartercar has more time—can do more work—make more money—and knows the real joy of living.

Let us send you valuable information concerning these excellent automobiles.

Cartercar Company

PONTIAC, MICHIGAN.

How You Can Help the Review and Get Paid for Your Trouble.

The best kind of an advertisement that a publication can have, is a good word from a satisfied subscriber to a friend. I know that the REVIEW must have a lot of satisfied subscribers from the fact that such a large number of them have been taking it so long.

Now I am going to ask every live subscriber to help me boost the subscription list between now and January first. I am asking you *right now* for two new subscribers from your neighborhood. I am sure they are there, and that you can get them. It is only a question of "will you?" and I think you will.

Use These Arguments.

Take a copy of the REVIEW, and go right over to that friend or neighbor who keeps bees. Tell him how you value the paper, and how oftentimes one article is worth many times the subscription price. If he says that he has but a few colonies of bees and doesn't read much, tell him he doesn't have to read much—that if he gets any information during the whole year that will enable him to get an extra eight pounds of honey, that it pays for the REVIEW. More than that, tell him if he has any boys or girls who will get interested in bee-culture from reading the REVIEW, that it may mean an additional revenue from the farm, and may also be the means of *keeping that boy or girl from an unnatural city life*. Can he afford to invest a dollar for the welfare of his children?

For Beginners, Too.

If he says that he is just a beginner and that the REVIEW is for the advanced bee-keeper, tell him that is where he is mistaken. The REVIEW *is* for the advanced bee-keeper, but *for the beginner also*. Tell him if he wants to learn how to keep bees, that he wants to get right up close to the big fellows who are making a practical success of the bee business, and that is just the kind of fellows who are writing for the REVIEW. If he thinks the bee industry is a small affair, tell him Uncle Sam estimates that there are at least 800,000 bee-keepers in the United States.

Balance of Year Free.

Last, but not least, tell him you are going to give him the balance of this year free, providing he subscribes right now for 1912. Also tell him that he can help you by subscribing now, for the editor and publisher has offered to extend your subscription one year if you can help him boost that subscription list by sending in but two new subscribers for 1912. Ask him if he will be one of the two, providing you can get the other. Don't be afraid to tell him what you get out of this—it won't hurt, but will help you get him. He will appreciate the confidence.

That's the Proposition.

Send in two new subscribers for 1912 at once, and I will send the new subscriber the paper to the end of 1912 for his payment, and I will extend your subscription one year for your trouble. Subscription price to collect is the same as applies to your locality, given in editorial department of this issue.

THE BEE KEEPERS' REVIEW,
230 Woodland Ave., DETROIT, MICHIGAN.

2 Years for \$1^{OR} New Bee Book Free

No. 1.—We have some extra back copies of the American Bee Journal for each month of 1911, and so long as they last we will send **all these copies and to the end of 1912** (to a new subscriber) for only \$1.00. This makes two years for the dollar. Better send in your dollar **at once**, and take advantage of this offer. It surely is a big bargain in bee literature that you should accept if not now a subscriber. Why not order today?

No. 2.—We have had Mr. C. P. Dadant revise Newman's "Bees and Honey" book of 160 pages, making it now nearly 200 pages, with over 150 illustrations. It is called "**First Lessons in Bee-Keeping.**" Just the book for beginners. Bound in strong paper cover, with brood-comb illustration. Price, 50 cents, postpaid; or we will send it (to a new subscriber) with the American Bee Journal from now to the end of 1912—all for only \$1.00.

Sample copy of the American Bee Journal free. Address, GEORGE W. YORK & CO., 117 N. Jefferson St., Chicago, Ill.

IT PAYS TO USE

DADANT'S FOUNDATION

A. G. WOODMAN OF GRAND RAPIDS,
AGENT FOR MICHIGAN.

DADANT & SONS
HAMILTON, ILLINOIS

National Bee-Keepers' Association

Objects of the Association

To promote and protect the interests of members.

To prevent the adulteration of honey.

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The Standard Bee Supplies.

Hives, sections, foundation and other supplies for the most discriminating of large beekeepers. The smallest want of the one colony man taken care of just as promptly and as accurately.

On the Pacific Coast.—A carload of orders, packed complete at the factory, leaves about December 1 for San Francisco for reshipment locally. Large beekeepers don't miss this rare opportunity to get fresh-from-the-factory goods. Write John C. Frohlinger, 257 Market Street, San Francisco, Calif.

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Where the good bee-hives come from.

Factory, Falconer, N. Y., or 117 North Jefferson Street, Chicago, Ill.

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WHAT HAVE YOU TO OFFER?

Write me quick. Send sample of your extracted. Tell me how much comb honey you have and how put up for shipment. Will buy for cash or handle on commission.

S. J. GRIGGS & CO.

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AQUASUN

One gallon of dark honey makes 200 to 300 gallons of Aquasun, which is finer in flavor and more nutritious than any apple or grape juice. Made quickly, by agitation, same as buttermilk.

ANTABUM

One gallon of dark honey makes 20 to 40 gallons of Antabum, which, fed to bees, as a spring tonic, enables them to digest and store 3 to 5 times as much honey as when not so assisted. Either process, by mail, \$1.

C. W. DAYTON, Chatsworth, Calif.

For Remelting Honey use a **Detroit Fireless**



RADIANT STYLE—Heat the metal radiators a few minutes only—then imprisoned heat cooks the food.

Heat the plates just the right temperature. Put them in the cooker. Put in your pails, glasses or bottles of candied honey. No need to remove the labels. Shut up the cooker, and your honey is melted with no attention, no danger of over heating, and no muss.

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She will appreciate the saving in *fuel, time and labor*, and you will appreciate the better cooking. You don't know what rolled oats taste like, if you haven't eaten some cooked in a *Detroit Fireless*. Put them to cook the night before, and find them all ready for breakfast the next morning. In cooking meat the *flavor is all saved*. You couldn't buy a better *Christmas present*, and then think of our

Free Trial Offer A "Detroit Fireless" will be sent you on 30 days' trial; will pay for itself in the first three months. Write to-day—get our handsome catalog and this new offer.

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Are our specialty. Winter your bees in Protection Hives. Liberal early order discounts.

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Early orders for the Old Reliable Bingham Bee Smokers. Address

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WANTED WHITE HONEY

Both comb and extracted. Write us before disposing of your crop.

HILDRETH & SEGELKEN

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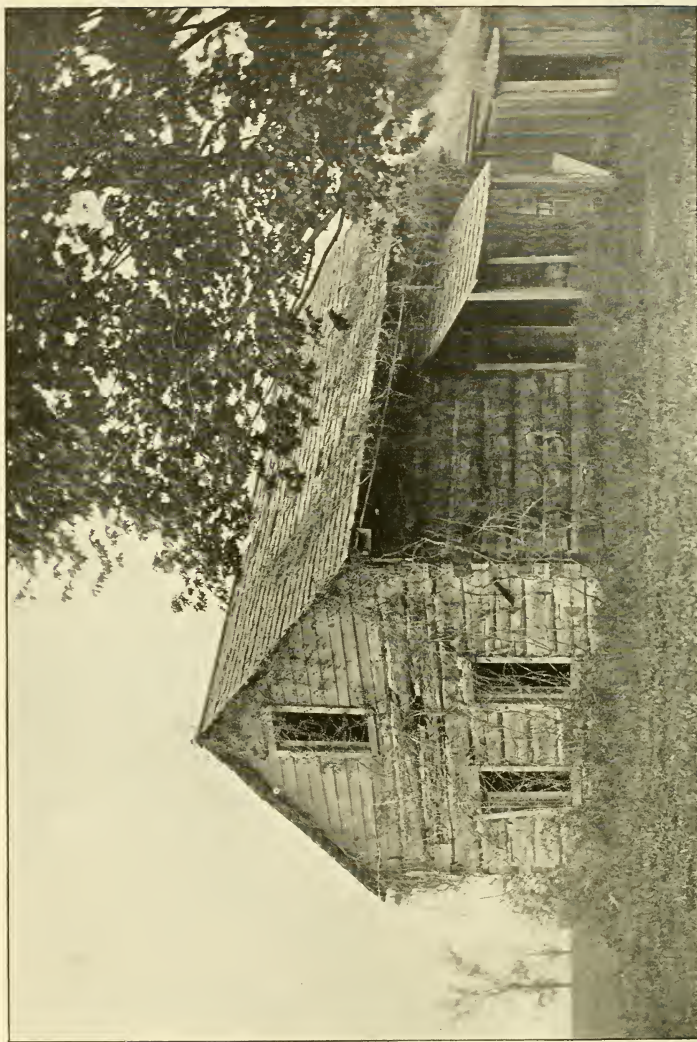
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2-10-11t



"Take Me Back to My Boyhood Days"—A Type of Dwelling Fast Disappearing in Michigan.
Photographed by W. Z. Hutchinson.

The Bee-Keepers' Review.

A MONTHLY JOURNAL

DEVOTED TO THE INTERESTS OF HONEY PRODUCERS

\$1.00 A Year

E. B. TYRRELL, EDITOR AND PUBLISHER

OFFICE OF PUBLICATION - - - 230 WOODLAND AVENUE

VOL. XXIV.

DETROIT, MICHIGAN, NOVEMBER 1, 1911.

No. 11.

Shall I Sell My Honey Through Grocers, or Direct to the Consumer?

E. B. TYRRELL.

THIS morning, as I was getting together my copy for the November number, I found a letter in my mail, from a subscriber, reading as follows: "I'm considering either of two propositions for the winter-bottling for the grocery trade in established territory, or, selling from house to house in the cities. Would like to see some of your experiences on pages of the Review."

While the advice might not be good in all cases, yet I should, without hesitation, advise my subscriber to adopt the house to house system, or "direct to the consumer" campaign.

Why?

The present price of extracted honey makes bottling for the trade at a profit almost impossible. This is true even on a large scale. Two large bottlers of honey in Detroit, firms who used honey by the car load, advise me that they have found it so, and have closed that branch of their work. If big con-

cerns can not bottle at a profit, to sell to grocers, when they have all the selling machinery already in motion, how can the individual bee-keeper expect to do it?

Grocers as a rule are poor honey salesmen. It is generally a case of the blind leading the blind. Neither the grocer nor the consumer knows anything about honey. How can you expect them to sell it? Anything larger than a pound package with them "sticks."

Again, after you work up a nice trade among grocers, you are never sure that you have it. A competitor can often "wipe you off the map" by reducing the price with an inferior article. Not so with the consumer. A reduction in price is quite apt to raise the suspicion with him that the goods offered are not genuine. I should not be surprised if the offering of extracted honey in the past at a low price has been one of the principal causes of the suspicion

among consumers that it is adulterated. Why shouldn't it? As one consumer stated to me the other day: "You know that we buy nuts with the shells on at so much a pound, but when we buy the meats alone, with the shells removed, they cost us a great deal more. I thought it was the same with honey."

THE PACKAGE.

For direct-to-the-consumer selling, the package is of prime importance. It must be neither too large nor too small. Remember it costs just as much to take an order for a small package as a large one. It costs just as much to deliver it. The package, then, should be just as large as the consumer will buy, which reduces selling and delivering expenses, and enables a sale to be made at a popular price without reducing the profits. In figuring on this package question, remember it is not the number of sales that count, altogether, but the amount of business done and honey sold. If, of ten people who would buy one pound of honey each, one of them would buy ten pounds, you had better sell the one the ten pounds, thus making the same profit, giving the consumer a better price, and saving the other nine for future ten-pound prospects. Rest assured they *will* be when they realize it is to their advantage *to* be. For the above trade I should advise what I am now using, a ten-pound friction-top tin pail. The size is $6\frac{5}{8}$ inches wide, by 7 inches tall. Don't let them sell you a full gallon, as it is too big for a ten-pound package. Label your honey "ten pounds net," and then be sure that you have ten pounds. Don't sell the package as a gallon of honey.

HOW TO GET CUSTOMERS.

The ways of getting customers are so many and varied that it is impossible to give them all in this article. Two or three will serve to start you thinking along this line, and thinking is one of the best plans out.

When I first came to Detroit, my time was fully occupied in an office, and I had no time to make a personal canvass, so I hired a high-school boy to begin a house to house canvass. This canvass was started the last of June, and was for deliveries to be made in August and September. You can see by this that I had the field to myself, for no one was canvassing for honey at that time. I paid this young man \$5.00 per week, and he took an average of ten orders a day. At first he carried a sample, but it did not take long to learn that was not the best plan. No matter how nice your sample looked when you started out in the morning, it soon became a mussed looking bottle by the continual opening, and sampling. So the sample was discontinued and orders were taken by verbal explanation. It would surprise many to know that when we discarded the sample the orders increased.

The package we sold was a ten-pound friction-top pail, as before explained. We also took orders for comb honey, but one year was enough for that. The price asked for this honey was \$1.50 per pail, and I hesitated before placing the price that high, but now it is a question whether it is high enough. No one objected to the price, and after the first pail was delivered to a customer there was no request for a smaller package. In fact, the complaint was that the honey went so fast.

TRIAL ORDERS.

The first year these orders were all taken as trial orders. I mean that the order was taken with the understanding that the honey would be delivered, and not collected for until a few days or a week after delivery. This killed all arguments regarding the quality, for of course the honey must be good to leave in this way. Each pail was nicely labeled with both address and telephone number on the label. As an introduction I feel that this plan is an excep-

tionally good one. It costs more than a direct sale, but you get many orders that you would otherwise miss. Not all orders will deliver, but a good per cent will.

TELEPHONE ORDERS.

The next year this same field was canvassed by an older gentleman on a commission agreement. This time the orders were direct, but with the understanding that the honey was to be examined at time of delivery, and was subject to the buyer's approval. This worked nicely, but you must remember that the introduction had already been made to many of the buyers. A great many follow up orders now came by telephone. People who had bought would often have company, the honey would be on the table, and the company would want to know where they could get some just like it. A reference to the label would show the telephone number, and a call would be the result. In these cases the delivery was all there was to the sale. One family has taken from me this year 17 pails, part for themselves and part for their neighbors. Who says a ten-pound pail is too much?

SELLING TO CLUBS.

Here is another plan. All over this country of ours are clubs, associations, etc. These clubs, etc., are always on the lookout for some new entertainment or dinner. To one of these I once proposed a hot-biscuit and honey supper or dinner. If they would furnish the biscuit, I would furnish the honey, providing—and here is the string—that the leader would explain who furnished the honey, that it was furnished free, and that it was done purely for advertising. Those who were in attendance were told how this honey was put up, and that orders were to be left with the one with whom the arrangement was made.

The first time this plan was tried was with a fraternal order in Illinois.

It was right among the farmers, and I sent a ten-pound pail by express prepaid for the supper. The result was that I received an order for 17 pails if I remember rightly. Remember this was at the \$1.50 price, and went direct to the farmer. From this you can see that there is a big field not yet developed in the honey consuming line.

ADVERTISING.

Still another plan is the local press. Where you have a phone always use the phone number in your advertisement, for many people will step to the phone and call you up who would not take the trouble to write. It cost me money to learn this.

THE WORKING MAN.

Still another source of customers is the working men. Call on them where they are working on new houses, at the street-car barns, and any other place where you can reach them. Here is where the lack of a sample again comes in handy. You are simply talking to one man at a time, and no one else knows your business until you get ready to tell him. Curiosity gets the other fellows ready for your story when you get to them. Avoid talking to a crowd, unless you can have that crowd's undivided attention.

If these suggestions will get the reader thinking along this line of "direct-to-the-consumer," then the article is worthy a space in the Review. Otherwise not. Please remember, however, that you can not prepare your honey too nicely. I now, in addition to the label, wrap each pail in nice clean white wrapping paper. I cut a circle for the top, another piece just right to go around, and strips to go over the top and down the sides to fasten the top piece down. All my honey is first heated to about 150 to 160 degrees, and then strained through two thicknesses of cheese cloth before putting in pails.

Detroit, Mich.

A Corporation of National Scope for Handling the Honey Sales

GEO. W. WILLIAMS,

Pres. Redkey Apiary Company.

A PROPOS of the matter of marketing our honey crop, I have been very much interested in the recent discussions. I fully believe that we producers ought to, and can, by proper efforts secure better prices than we have been getting. Two factors have been somewhat against us in the past, viz., lack of proper exploitation, if you will pardon the expression, and a lack of proper marketing systems.

A LARGE AMOUNT OF HONEY CAN BE SOLD
IN SMALL VILLAGES.

In regard to the first, it is astonishing the amount of honey that can be sold even in a small village by judicious advertising. As honey is in the nature of a luxury, it has to be constantly presented to prospective customers, and such effort invariably brings results. The second factor relates more closely to a class of producers who are careless in producing and "mean" in marketing. They offer that second rate product at a lower price than the practical producer wishes to sell for. This type of producer does more to demoralize local prices than almost any other one thing. I sometimes feel that foul brood is a blessing in disguise, as it is rapidly eliminating this type of producer.

A TRINITY OF CURES.

So much for the diagnosis of the trouble—now for the remedy. Please allow me to prescribe a trinity of cures. 1st. Educate the general public to eat honey and believe it necessary for their well-being and happiness. 2nd. Educate the producers to produce a uniformly delicious article that will appeal to the consumer and "when once a customer, always a customer." 3rd. Some

means to bring the producer and consumer closer together, and incidentally bring the 1st and 2nd about.

Now, as to the 1st, we have an object lesson in the fact that the public have been educated to think that parched wheat (postum) makes an excellent beverage, and that all sorts of breakfast foods, that have about as much relish to them as chips and sawdust, are necessary to the health and happiness of the human race. When "printer's ink," judiciously applied, does such wonders with such unpromising materials, then it seems hopeful that a minimum of the same medium, properly applied would accomplish manifold more, when such a delicious and wholesome food as honey, is similarly applied.

If we are to consider seriously a proposition to advertise and sell the honey of *all* the producers of the U. S., we have a huge proposition before us. But I believe that such a proposition is in our reach and when carried out will add a snug profit to each pound produced and give a market for many times the amount now produced.

NATIONAL CO-OPERATIVE ASSOCIATION.

To do these things would require a corporation close enough to do business without being unduly hampered, with a large amount of money behind it, and elastic enough to cover the territory of the U. S. in a co-operative organization. And, emphatically, a uniform product to be sold under a copyrighted brand. My idea of this would be to organize a joint stock company, with sufficient capital stock to be sold to honey producers to furnish the funds to organize and start operations.

The business to be located at some

central point, and operated by a competent executive department, the real asset of the company to consist of a copyrighted trademark to be advertised generally and systematically, under which the honey of the members should be sold and guaranteed.

The expenses of advertising and management to be paid by the labels for distinguishing such guaranteed product.

SAMPLING AND GRADING.

Of course, a system of sampling and grading would be necessary to insure uniform results, and this with the actual selling to the jobbers would lie in the province of the Executive Department, leaving the producer free to devote his energies to enlarging his output and improving its quality.

You can readily see that a proposition of this nature fully carried out is a *big* proposition indeed, requiring a *big* executive capacity, and one that would bring *big* results to producers.

You know enough about the advertising business to know that a big amount could be used that way, but a fraction on each pound, "licensed," would bring in a *big* amount.

It would be easier to handle a proposition of this kind if the goods could be gathered together in some central point and graded first, then reshipped to place of distribution, but this is obviously im-

possible and if we attain anything like success, a plan built along the lines suggested seems to be the obvious thing. I have had something to do with joint stock companies, both popular and close, and I believe that this could be worked out to a successful completion.

The National has hinted at something of this kind, once or twice, but their plans lacked scope, and failed to grasp what to my mind is the chief factor for success—a *thoroughly adjusted copyrighted trade label*—which, while it would possibly aid the sales of all unbranded honey, would discriminate enough to make it worth while for every up-to-date producer to buy the privilege of using it.

Redkey, Indiana.

[I am afraid, Friend Williams, that your plan would strike some snags. The consumer has been educated to believe that a "brand" or trade-mark" means "every can alike." By selling the right to use this trade-mark to all members you would have every kind and description of honey put up under that brand. The consumer, not finding it all alike would naturally brand the whole thing as a humbug.

But your suggestion to ship the honey to some central place, there to be graded and branded, is good, and I predict will be done at no very distant date. There is no question but what the marketing system is capable of much improvement.]

The Caucasian Bee Among the Leaders.

J. W. BLAKE.

I WISH to reply to Mr. Strohschein, page 172, July issue of REVIEW. I have been interested in bee culture for 25 years. I have given both old and new races of bees a fair trial, and will say the Caucasians have proven the best of all varieties, so far.

Your many readers may ask the question, why? Well, we have three honey flows in Central Ohio. First, the fruit bloom; second, clover; third and

lastly, fall flowers. There is a lapse of three or four weeks between fruit bloom and clover. The Caucasians during this dearth keep right on raising brood and are in splendid condition when the clover is blooming. The Italians stop at brood rearing at the end of each honey flow, therefore they are behind in numbers and a colony of bees few in number is no good when it comes to comb honey production.

Caucasian queens are more prolific

than the yellow bees, therefore they should have larger hives, and plenty of ventilation in order to check swarming. They are more hardy than the Italians and will fly during early spring when it is from 10 to 15 degrees colder than the Italians can endure.

Mr. S. jumped to a conclusion and condemned the best race of honey producers, in my estimation, we have, if properly managed. Why condemn the whole race simply because one queen that cost him nothing failed to deliver the goods? I have purchased queens from several breeders and will admit some of them showed yellow in their markings and were worthless. A purely bred Caucasian worker shows no yellow markings whatever, and as far as their using too much propolis is concerned, that has no bearing whatever against them, as they never carry it among the sections, and if let alone will remove it as soon as the weather will permit in the spring.

CAUCASIANS REQUIRE DIFFERENT HANDLING

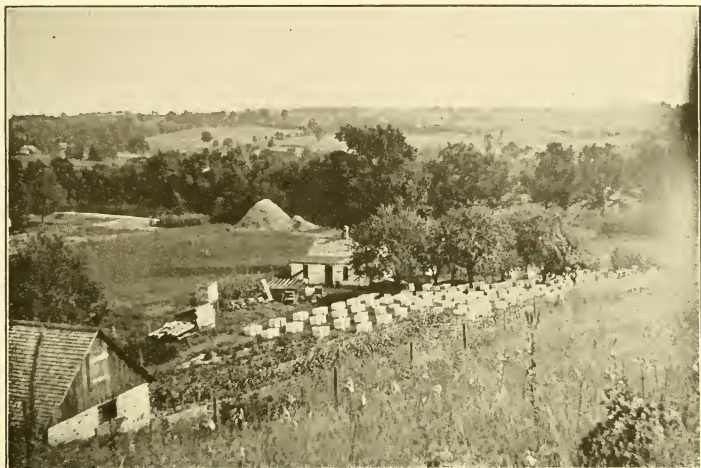
There is another idea that bee-keepers seem to have, that is, the text books on bee-keeping. These books were all written by men who took their observations from the habits of the Italian bee. No one can succeed with the Caucasians and follow the teachings of the Italian fancier. We must study the habits and natural instinct of each race, for best results. Let us be charitable, Brother Strohschein, and not condemn before we investigate. You know when Galileo told the Professor of the University of Pisa that Jupiter had a moon they "cussed" his telescope and refused to look through it for fear they should see that Jupiter did have one.

I wish to congratulate the new editor of the REVIEW on the neatness of his last issue and if it leads out as my Caucasians did this year, "it will be a thing of beauty and a joy forever."

Cardington, Ohio.



"Mother Nature Protects Them. See the Hill?"
Apiary of A. G. Woodman & Co.



"Don't They Look Fine?"—Apiary of A. G. Woodman & Co.

A Beautiful Western-Michigan Apiary

A. G. WOODMAN.

FRIEND TYRRELL: I am sending you two pictures of our apiaries which had 110 colonies, spring count. We took 4,000 pounds of extracted honey, and increased them to 250 colonies. We ran them strongly to increase, which of course cut off the honey crop. Practically all the increase was made after the white honey was gathered.

This yard is located 15 miles northeast of the city, while our farms are located in a different direction, northwest. The great hill shown in the one

picture acts as a wind-break to the north and west of the yard—the most ideal yard we have ever owned. We call the hill Mount Maria.

Grand Rapids, Mich.

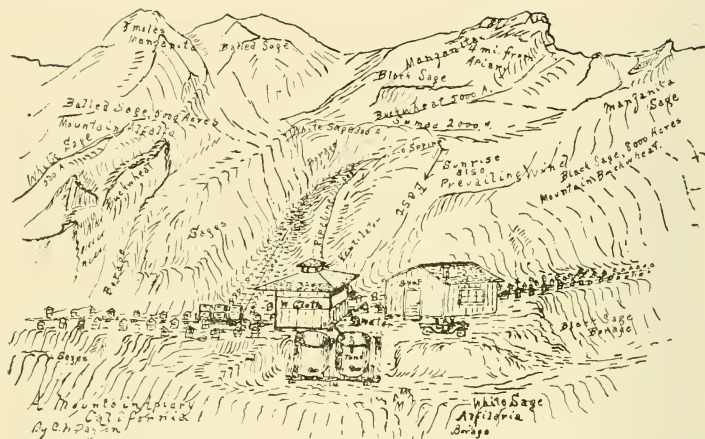
[In the two pictures here shown, there are two things worthy of attention. One the natural protection afforded the bees by the hill, and, second, the care that is evidently bestowed on this apiary by the owner. In a talk with Mr Woodman some time ago, he told me that his desire was for a model apiary, and judging by the pictures, I should say his hope was realized.]

A California Apiary Location

C. W. DAYTON.

IN the first place, where the extracting house and shop stand, it was so steep that a hive would almost slide down the mountain. All the

level land (about an acre and a half) was made with the pick and shovel. No one had ever seen the spring which now sends out a constant stream, even in the



It took 5 or 6 Years to Build this Apiary. Location in California.
(Drawn by C. W. Dayton.)

driest times. It took me about five or six years working three or four hours a day to grade the ground. There is space enough for 600 or 800 colonies. I have kept over 400, and at present there are about 200 colonies. I have known this location to yield 75 tons in a single season, and then it did not seem to be more than half what might have been gathered.

I desire to call attention to the arrangement of the extracting house and its ventilated roof; also to the 24-inch strip of wirecloth, extending all round the outside. This provides a cool place in which to work, though the days may be hot.

The early sunrise strikes here as soon as the sun is up, and the winds help the bees to carry their loads of honey down the mountains. The sage extends about a half mile east of the apiary and the mountains extend to the north (not shown) several miles.

Chatsworth, Calif.

[To work three or four hours a day for five or six years in order to have a place to establish an apiary requires more patience than the most of us have, but probably no more than we ought to have. However, a location that will yield 75 tons of honey in a single season is worth doing a lot of work to secure.]

Don't Undersell the Wholesaler. A Few Pertinent Comments

FRANK COVERDALE.

THE marketing of honey is certainly of much interest to everyone who produces the commodity for the great markets, yet the main

essential is for every producer to make himself or herself very familiar with all markets, and, if one has the time, keep the home market well supplied at a

figure that will work harm to no other producer. Especially can a good trade in extracted honey be built up around one's immediate neighborhood or neighboring villages, if the bee-keeper has time. It will pay him well to look after this kind of a trade, and when one is careful to put up nothing but a well-refined product, this trade will greatly expand from neighbor to neighbor and from village to village and soon this trade has so increased that it gets out of driving reach and it will have to be supplied by rail. This has been the experience of the writer.

WHOLESALE OR RETAIL.

This honey need be sold only at a good figure and to cash customers. Comb honey is looked upon differently by some, and sells better in the city market, and should be put up systematically, then a market sought out to a wholesaler, or one must seek the retailer direct, and with the right man who has the time it usually is to a profit to do the latter. However, one must be careful here again, and be sure not to work harm to other producers. He must hold sufficiently high the price so that the wholesaler who may have bought heartily can sell to his retail trade at a legitimate profit, otherwise one year hence he will be in for buying his supply cheaper for future sales. For instance, I sold two cars several years ago to two wholesale houses at a good figure. Later many producers came in all around and sold *direct* to the retail customers,

and the result was that these houses were compelled to carry over this comb honey one year before they could turn it at a profit.

KEEP UP YOUR PRICE.

I believe when marketing direct to the retail trade, one should either get what the wholesaler is intended to get or sell to the wholesaler, so that the big market may be kept in a healthy condition. The marketing of honey recklessly works havoc, just as far as it is indulged in. A precarious producer takes his honey to town, sells it 3 cents under its real value; in a few days the wholesaler comes along with his honey and the retailer says, "I can buy all I want for 3 cents less than you ask." This first man ruined this market. But this latter class is growing less and people at large are getting better posted along all lines.

HUNT FOR MARKETS.

It will certainly pay the producer who



First Lessons in Bee-Keeping, 40 Years Ago. Brimstoning the Bees.
(Drawn by C. W. Dayton.)



"Grandma Does The Extracting."
(Drawn by C. W. Dayton.)

has a bunch of honey to get it well put up, then inquire well into the markets and get out and hunt up a good sale. This very effort will open up to him the big markets, and broaden his acquaintance, and he will find himself in touch with both retailer and wholesaler, which will enable him to dispose of whatever he may have, at a good figure instead of driving it to slaughter, year after year. It will become a business proposition, just like marketing any other produce that comes from the soil.

I know of one small producer last season who made a visit to a friend or relative in a large city, and sold direct to a bunch of consumers. He far outstripped all us old veterans, disposing of his entire little crop at 20 cents per section. If one can do this and has the time, let him. He does no

one any harm and helps himself, and may be opening up a market for future sales; this same man sold some cases as high as 25 cents per pound, and in this he is doing well.

It has been my practice to sell direct to wholesalers as I have always been very busy at home. But I feel sure that where one has the gift and ability to do such work, and the time, let him get the most of his labor, always being careful to work no hardship for the great honey market.

WHY THE DIFFERENCE?

During the past season I found 4 cents a pound difference in different city markets. Such state of affairs seemed queer to me, so my honey had to be sent further by rail. There is quite a little comb honey

produced here, and the bee-men are a splendid lot. They are willing to join hands and boost the market. A good many are getting 3 or 4 cents per pound more, because of the good feeling that prevails, all holding out for better prices with a keen inquiry. This is as it should be, in the mind of the writer.

Maquoketa, Iowa.

[This article strikes an important note of warning, and that is not to undersell your wholesaler. Many times have I seen farmers go to their local towns, sell all their produce that they could to the dealer, and then peddle out the balance *at a reduced price*. This not only works an injustice to your dealer but to every producer as well, yourself included.]

A Cheaply Made Winter-Case, Having a New and Unique Feature

VINCENT F. SEBOLD.

I AM pleased to send you two cuts of the winter case I am using.

By referring to the cuts, not much of a description will be necessary to enable the reader to see how the case is constructed.

The bottom board is simply a flat board, 2 ft. 4 in. x 3 ft. in size. The brood case is simply a box within a box. The outer case is 2 ft. 4 in x 2 ft. 10 in. outside measurements. The inner case is 16½ x 20½ in., outside measure, with a board nailed from the outside of the outer box to the inside of the inner box, forming a bottom which prevents the packing material from falling on the bottom board. The front is boxed up 3 inches from the bottom board to form an entrance. The chaff

tray shown in the center of the picture is 2 ft. 4 in. x 2 ft. 10. in x 6 in. deep. A piece of burlap is stretched across the bottom for holding the chaff. A strip 2 inches wide is nailed on each end, one inch from the top, as a support for the cover. The cover is 2 ft. 7 in. x 3 ft. with a rise of seven inches to the peak. This cover telescopes over the chaff tray. The eaves extend a half inch out over the chaff tray to admit air for ventilation, which keeps the chaff packing dry. The whole is covered with some good roofing paper:

GIVES GOOD RESULTS.

I have used this case for the last three winters and find it very satisfactory. The cases are quick to pack and unpack. All that is necessary to prepare the col-



Showing the Construction of Vincent Sebold's Packing Case.

only for winter is to set the hive one side, put the packing-case bottom-board where the hive stood, set the hive back on this bottom board, set the packing-case over the colony, finally putting the chaff tray on top. The whole is done in less time than it takes to tell it. You do not have to handle the packing material at all. The inside entrance can be contracted or left open as desired. The outside entrance is $\frac{1}{2}$ in. \times 3 in. while the entrance through the inside case is 3 in. \times $16\frac{1}{2}$ in. This forms a vestibule or storm door which keeps the sun from shining in and drawing the

bees out when it is unfit for them to fly.

Latrobe, Pa.

[Although Mr. Sebold does not make it entirely clear in the above explanation, yet I infer from what he writes that the above case is just right for an eight frame Langstroth hive, and that it will contain such hive without the necessity of transferring the frames from the hive to the packing case. In other words, this is a packing case with both outside and inside rims in which to place a whole hive of bees without removing the frames. In this respect it differs from the ordinary winter-case and it seems to me, aside from the additional expense, should be a valuable feature.]

This Man Made \$6,400 in 1904, \$7,640 in 1907

M. A. GILL.

THE most money I ever secured in one year from the bees I own and have leased was in the year 1907, all comb honey. It was sold to C. H. W. Weber & Son, Cincinnati, Ohio, at \$3.00 per case for No. 1, and \$2.75 for No. 2, f. o. b. Longmount, and brought \$7,640, and was produced from a little less than 1,000 colonies.

In the year of 1906 my yield was about the same but I had less bees, and it sold for \$2.75 per case at Longmount. In the year 1904 I had \$6,400 from about 700 colonies. The largest average I ever had was in the year of 1900 when my bees averaged \$14.00 per colony, all comb honey, which sold for \$2.50 per case. The most money I ever got from a colony was in Wisconsin in the year 1881 when I took \$42.00 from one colony; \$36.00 worth of extracted honey and \$6.00 for a nucleus swarm, made from the old colony.

One peculiar feature was, that in the year above mentioned some apiaries

would average perhaps \$11.00 per colony, and another one, perhaps not four miles away, would only average \$3.50 per colony. But these conditions always have and no doubt always will exist.

WHAT WERE THE PECULIAR CONDITIONS?

You ask what were the peculiar conditions that enabled me to secure these yields. I think my answer will cover such yields in both the rainy and arid regions alike, and that is that the proper conditions must exist for two years to get a good honey crop. This does not mean that we will secure two good crops of honey, but that the proper conditions of heat, moisture and plant growth must exist for two years in order to affect the perennial, biennial and annual plants.

Of course one could get a good yield from buckwheat if the conditions were only right for one season, but if the crop was to be from buckwheat and sweet clover then the conditions must be right for two years.



"All Ready for Winter."—Vincent Sebold's Packing Case.

NO PROMISE FOR SUCH CROPS IN THE FUTURE.

You ask if there is any reason why these crops may not be secured in the future. I confess I can see no promise of their return in the near future in this section of the country. Of course the country could soon rally from the severe spring droughts, of which we have had two out of three, which leaves the ground short of seeds when the conditions do come right. But the greatest menace to our future prospects is grasshoppers which have been gaining ground for years past as they have in the alfalfa regions of Hungary, Greece, and the Argentine Republic, until the governmental authorities have been compelled to take the matter in hand to exterminate what was becoming a national pest.

ONE HUNDRED BUSHELS OF GRASSHOPPERS CAUGHT IN A DAY.

You will know that there were grasshoppers here when I tell you that farmers were known to go out with traps and catch 100 bushels in a day in their

fields, and then could see but little difference in the amount left. They have eaten the sweet clover so badly for two years that it has nearly disappeared in some sections. They have killed nearly all of the new seeding of alfalfa for the past two years.

Farmers have commenced to organize for their destruction, and are finding out that one of the most expedient means is to harrow all their lands, even to the highways, during the late fall and early spring, which exposes the eggs to the air and sun so they do not hatch.

I did not secure a pound of surplus this season, and fed 14,000 pounds of sugar syrup to carry the bees through the winter.

If the conditions next spring are like the past three years it's myself and the bees for some neighboring state where grasshoppers have not yet made their appearance. But with the consent of the "hoppers" this country must return to the growing of alfalfa as it is her agricultural anchor-sheet.

Lorgmount, Colo., December, 1910.



EDITORIAL

Bee-Keepers' Review

Published Monthly

E. B. TYRELL, Editor and Publisher
Office—230 Woodland Ave., Detroit,
Mich.

Entered as second-class matter, July 7, 1911, at the post office at Detroit, Michigan, under the Act of March 3, 1879.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Advertising Rates on Application.

"Napoleon, during the reverses in Spain, and when he was compelled to give his entire time to the diplomatic difficulties with Austria, cried out in one of his dispatches: 'In warfare men are nothing; a man is everything.'"

"The small man, whether he is in a big or little place, thinks his secret method is so vital in his business that it would be suicide to divulge it."

The annual meeting of the Pennsylvania Bee-Keepers' Association will be held in the courthouse, Lancaster, Pa., Dec. 1 and 2. This promises to be the most important meeting yet held. Every bee-keeper is invited to be present. Matters of interest will come up for discussion. An examination for

volunteer apiary inspectors will be held at the same time. H. C. Klinger, secretary.

M. B. K. A. Convention.

In the last issue I gave the dates of the next convention of the Michigan Bee Keepers' Association. Full program will be given in the December number. Remember the dates, Dec. 13 and 14.

The convention of the Michigan Association is noted for its good attendance, and the interest taken. Saginaw, where the convention will be held, is centrally located, and we shall be surprised if there is not an exceptionally large attendance this year. True, this has not been the best year for bee-keepers, but Michigan bee-keepers are a live bunch, have secured some honey, and expect a good big crop next year. Come, anyway, and don't forget the wife, mother, sweetheart and babies. The auditorium is big enough for all.

Classified Department.

"I am well pleased with the REVIEW, but there is one thing about it I don't like. It hasn't any classified department." So writes one of my subscribers. Now, I had been thinking the same thing myself. Why not have a classified department? Why not give the readers a chance to advertise in a small way whenever they wanted to? So with this issue we have the department. Looks pretty good, too, doesn't it?

As a starter we will divide it into just two parts, "Wanted" and "For Sale," but as the department grows we will make further sub-divisions later.

So send along your liners. They will sell or buy for you bees, honey, poultry, farms, eggs, incubators, new or second-

hand bee supplies, queens, beeswax, help, typewriters, make exchanges, and, in fact, take care of any want you may have in the buy and sell line.

Our Frontispiece.

What a story the old log cabin, shown in our frontispiece this month, might tell. Note the woodbine climbing over its decaying walls. The windows are gone and the casings are becoming loosened.

The home of some former settler, it could undoubtedly tell of hardships endured and burdens borne. Privations, no doubt, were many, and often the barefoot boys and girls could look up into the tired faces of the father and mother and there read discouragement.

But through it all there gleamed the bright ray of hope. His discouragements, while different from ours, were no doubt no greater. He was literally hewing a home out of the wilderness, and what nobler work can man be engaged in than home-building? Health is generally the lot of the pioneer, and around his table there no doubt gathered a more happy gathering than can often be found in the finest mansion.

Knowing Foul Brood.

Editor York feels that possibly I was a little too severe on the bee-keepers in my September editorial on "Don't Bee-Keepers Know Foul Brood?" Mr. York says:

"One who has never seen the disease before may be excused if he does not recognize it at first sight."

But that's not the point, Brother York. The bee-keeper I referred to had colonies rotten with the disease, claimed he had read all about the disease so he would be able to recognize it, and then denied having it. If I am not mistaken, Inspector Sanders found extensive bee-keepers, men who read the bee journals, and who must have had the disease for years, either in their apiaries or around

them, and yet these men denied having this disease. What was wrong, didn't they know the disease, or didn't they want to?

I have before me a letter from a California inspector, and he says:

"I am just reading the letter from G. E. Sanders in the September number of the REVIEW, and it confirms my idea about inspection work. Most of the foul brood laws call for information from the bee-keeper in order to get an inspector to visit an apiary. We had such a bill passed by the last legislature, but it was vetoed by the governor, and I am glad now he did it. We want the inspector to visit all apiaries, information or no information."

Single Case Shipments.

R. B. Slease, of Roswell, New Mexico, comes back to me as follows:

"In answer to your attack on my shipping case talk, will say, no, I do not know that honey can be shipped in single cases. The bulk of my trade has been from retail merchants and they order anywhere from 1 to 5 cases at a time, and again our freight and express rates are the same on *single open cases* as they are on crated lots. Again I claim that all honey should be shipped in *single cases instead of crated*, as you can crate your honey, put on good hand-holds and fix it up as nice as you please, but the first freight man who has to handle it hooks it on a pair of trucks and when he gets it where he wants it, dumps it off the same as any other heavy box, and, *smash*, goes your *honey*, while if they are not crated they will set them off by hand instead of dumping the lot.

"I have shipped hundreds of cases singly and have never had a complaint from single tier cases, while I have had several complaints from crated lots. Then, only last week I happened to be at the depot when some honey arrived from a town down the valley, all crated in good shape, 12 cases to the crate. The freight men got the crates on trucks and dumped them on the platform right before my eyes, like a thousand of brick, and then there was some *broken honey*. If it had not been crated all would have been well, as there was a lot of 25 cases in the same car, and not a broken section when unloaded.



"We're From Missouri, You Must 'Show Us'."—Exhibit of M. E. Darby.

to win the premiums, and the awards were quite evenly divided among the four exhibitors.

I am showing a cut this month of an exhibit made last year at the Missouri State Fair of the map of the State, made in honeycomb by the bees. This was obtained by making a frame of $1\frac{3}{8}$ -inch plank, pasting over it the map of Missouri, and then taking it to a sawmill, where the map was cut out with a band saw. The exhibit was the product of Missouri's State Foul Brood Inspector, M. E. Darby.

"I am bucking right against Manager France's figures, but he does not say those single cases were single tier cases. I believe I am right, and, from my own experience, know I am, so will hold my position till I let you know."

The above is certainly an interesting report. I should like to have more on this subject, as it is an important one, and would like to hear, not only from Manager France, but from buyers of honey as well. What has been your experience? Surely we don't want to crate our honey if it is not necessary. I am frank to say I should hesitate to ship in single cases, but am open to conviction. Bring on your testimony.

Exhibits of Honey.

Although this was considered a poor year for Michigan bee-keepers, yet I believe our State Fair exhibit in the Apiarian Department this year was one of the best, if not the best, we ever had. There was a real honest endeavor made

First Lessons In Bee-Keeping.

The book, "Bees and Honey," has been recently revised by that well known and extensive bee-keeper and writer, C. P. Dadant, and given the name "First Lessons in Bee-Keeping." The book has an attractive and unique cover, representing bee-comb filled with brood and honey. Even the eggs are shown in the cells.

The revision was made to bring the book up to date, for, as Mr. Dadant says, "Progress is prompt, in bee-culture as in other things. There are perhaps more changes in bee-culture than in most other agricultural branches, because the discoveries of the wonders of the bee-hive are relatively modern." From the examination made, I should say the revision had been well done.

I was especially interested in the picture shown on page 190, which shows an apiary owned by me several years ago. Well can I remember moving those

bees seven or eight miles by wagon after dark, over roads not too good. The picture brings back a whole army of recollections.

That New Constitution.

Before the next issue of the REVIEW is out, the readers will no doubt have had a chance to vote on the new National Constitution. Two things about it will cause serious thought. One, the membership fee, and the other the form of organization.

Regarding the first, it is proposed to raise the membership fee to \$1.50 per year. One-third of this, however, goes into the funds of the local branch, so it is no higher than many State Associations, united with the National, are now collecting. The Michigan has collected this amount for several years, and has prospered.

It may seem to some that this raise is a mistake, and that bee-keepers will not pay the advanced price. But we must not forget that sometimes a small fee is really more expensive than a large one. It is not so much what we pay, *as what we get for what we pay*. If our fee is so small that the whole amount is necessary for running expenses, and nothing left for progress, that fee is apt to be expensive, while a larger one, leaving a surplus for doing something extra for the members, might be really cheaper.

The present fee of the National just about provides for the expense of the National Convention and getting out the annual report. Manager France will tell you he must economize even to do that. This leaves nothing for the larger work of organization, looking up market conditions, advising members regarding their honey sales, assisting states in getting foul brood laws, and many other things that might be mentioned. This question of shipping packages, railroad rates, requirements of certain markets,

uniform packages and supplies, should all in time be taken up and cared for. But the first requirement is proper organization.

This brings us to the second part, or the plan. Before this the National has been a single body composed of individuals. No local body of bee-keepers had any representation as such body, and to my knowledge hesitated to make recommendations to the National, feeling that they would be presumptuous in so doing. The National Conventions then were simply great big local meetings, with no delegated power. The whole work had to be done then by the few officers, and in late years this has been left almost entirely to Manager France, who has probably been criticized because he didn't do more. The wonder is that he was able to do so much.

The board of directors, while capable, were entirely too unwieldy. Always appoint a big committee if you want nothing done. This is not because they can't do the work, but because of the difficulty of getting together or getting decisions. Ask Chairman Taylor. The new plan proposes to reduce the number of directors to five, place in their hands the running of the organization, and the action and compensations of the officers. These directors and officers will be elected by delegates. These delegates will be elected by the local branches, or associations. Could anything be more simple or effective?

If the new Constitution passes, it will mean that the directors must get together at once and provide for an organizing campaign to be carried on this winter. This is simple, and can be easily carried out. A plan must first be decided upon, and then that plan pushed to the limit.

Personally, I feel that if every member fully realizes what this proposed Constitution means to the National, they will vote for it without the slightest hesitation.

Ontario Bee-Keepers' Convention.

At Toronto, November 15, 16 and 17, the bee-keepers of Ontario will meet in convention. Their program promises to be business from the word go. Two important discussions will be brought before the convention, one on bee-disease and the other on co-operation. Full program has not yet been announced.

The REVIEW editor expects to be present, and looks forward with pleasure to meeting those Canadian bee-men, who are "doing things."

Later.—Since the above was printed, the program has come to hand, and shows a wide selection of topics, practically every one bearing upon questions of general interest to bee-keepers. The petty questions have all been left aside, and we shall be surprised if this is not one of the liveliest conventions held this season.

Some Kind Words.

I have received a great many kind letters since I have been publishing the REVIEW, and have resisted publishing them, but here are two letters I can't resist giving you:

"That last number on wintering was the best yet, and I got one point out of Ralph Benton's article which I consider worth all the Review *ever* cost me, and I've taken it for a good many years."

F. B. CAVANAGH.

"The late W. Z. Hutchinson when in health made an ideal editor for the REVIEW. I am more than pleased with the high standard which you are maintaining in the editorial work, and I am sure I get much more than the subscription value in taking it. Every bee-keeper should be able to take it to advantage."

R. F. HOLTERMAN.

The Honey Market.

You will probably remember that in the August REVIEW I stated that the market for honey was brisk, and that bee-keepers could obtain a good price, but advised that they *hustle to sell*, and that the time to sell was when buyers

wanted to buy. That advice was good, and from what I can learn the market conditions are not nearly so good now as they were at that time. Several heavy buyers have written me that they are now supplied, and some bee-keepers have written me asking for buyers. I do not look for much if any of a change in prices, but I believe it will be more difficult to find a buyer at the prevailing high prices than it was.

Of course, this editorial shouldn't be taken as a scare, for with a little extra effort the producer who has not sold will probably be able to sell at good prices, but the condition emphasizes the necessity of hustling for a sale, when the demand is active, whether that time be early or late. Always sell on an advancing market.

Buying Honey to Sell Again.

Editor York in the *American Bee Journal*, sounds a note of warning with reference to holding your local honey market. The advice is good, and is especially good in that it will no doubt show many bee-keepers, when they come to buy, that they have been selling their honey at retail at a wholesale price. We agree with Brother York that it is not good policy to let our customers go elsewhere for their supply of honey:

We have often wondered why more bee-keepers do not buy honey to sell again when they run out of their own crop during the fall and winter. It seems to us that it is very unwise for any bee-keeper to be out of honey at any time of the year, if it is at all possible to get it somewhere else, even though he did not make very much profit on the honey bought elsewhere and sold to his customers. We think it is worth while to be able to meet every call for honey so far as possible, even if there is but little profit. If, by buying honey and keeping it on hand, it helps to hold customers until another crop arrives, we think it is the thing to do, and that those who have worked up a demand for honey ought always to do their best to supply it all the time.

SELECTED ARTICLES

AND EDITORIAL COMMENTS

Why Produce Comb Honey.

Wesley Foster tells us in the *American Bee Journal*, why the Colorado beekeepers produce comb honey almost exclusively. He says:

One of the chief reasons for Dr. Phillips' visit to Colorado was to find out why we produce comb honey to such an extent. I do not know as he feels sure that he knows just why we do, but I think it is principally because we come nearer getting a fair price for comb than for extracted honey. Comb honey sells more readily for \$2.75 to \$3.00 per case of 24 sections than extracted does at 6½ to 7½ cents per pound. And I doubt whether you could persuade many Colorado bee-men that 6½ cents for extracted will bring in more cash for labor expended than \$2.75 per case or 11½ cents per section will for comb honey. I like to produce comb honey because it is cleaner and nicer to handle.

In speaking of the fall honey flow in Colorado, he also says:

Bees are "making good" on the fall flow from the third growth of alfalfa, and sweet clover, and are breeding better than common. Predictions are now that colonies of bees in Colorado will go into winter quarters with a good supply of young bees. Eastern Colorado has had warmer weather through early September than has the Western part of the State.

Treating European Foul Brood in the Fall.

Morley Pettit, in reply to a correspondent, gives the following in the *Canadian Bee Journal* with reference to treating European Foul Brood in the fall:

In reply to one of our correspondents, who has European foul brood in his beeyard, the Provincial Apiarist, Mr. Morley Pettit, writes as follows:

Owing to the nature of European foul brood, which is prevalent in your correspondent's neighborhood, there is nothing that can be done for him this fall, except to advise him to requeen his colonies with some good stock of Italian queens. In fact this is about all that can be, and that is necessary to be done for this trouble.

When we detect the disease in an apiary about the beginning of the swarming time, so that the "shaking" treatment can be applied without serious loss to the apiary, we advise that treatment; but if the disease is detected in the fall we certainly do not advise anything but Italianizing, as that alone will generally cure the trouble. It will at least hold it in check until the next swarming season. There is absolutely no use trying to cure black bees of this disease. The only sure method is the introducing of Italians.

Finding Queens.

Here is a problem for some enterprising bee-keeper-chemist to solve. A contributor to the *British Bee Journal*, after lamenting on the difficult task of finding queens, wonders if there is not some harmless chemical that could be placed on the queen's back, which would leave a mark easily seen, and still not injure the bee. Here is what he says:

"Referring to D. M. M.'s remarks on finding queens (page 386), novices like myself look with dread on the task which has from time to time to be attempted, of finding the queen in an ordinary well-stocked hive. It is not the labor that daunts one, but the probable futility of the search. Surely in these scientific days there must be some harmless chem-

ical preparation which can be applied to the back of a young queen before she is introduced to a stock and which will leave such a plain and indelible mark upon her that she can be afterwards readily found. There are several preparations which will mark, without harm, animals, not excluding human beings, and I should certainly think there is something that can be as well applied to bees—only it has to be found. Perhaps some of our chemist bee-keepers will be so kind as to bring their knowledge to bear upon this problem, the solution of which will be a boon to their fellow honey-growers."

Quarantine Stations.

After telling at length the difficulties he has in getting small bee-keepers to properly treat their diseased colonies for foul brood, David Chalmers advocates in the *Canadian Bee Journal* quarantine stations as follows:

To overcome these and other dangers, I have for some years been an advocate of "quarantine" stations, say one in each township or district, where diseased bees could be treated by competent persons. Last winter I hammered away at Mr. Hodgetts and Mr. Pettit, asking them to let some of us try it, and I might say I almost gained their consent. The latter, however, writing on January 24th, stated that "bees cannot be quarantined in the same sense as animals," and went on further to state that "he considered quarantine stations would be a menace to the apiaries in the "neighborhood." As far as I am concerned, a quarantine station may be established across the street from my apiary, provided it is run during June and July. There would be, however, no need of locating a station so close to any apiary. Why not advertise a demonstration to be held at a certain place on a stated day, convenient to a railroad depot and an hotel; have the bees in a given radius inspected before this comes off, and the diseased ones, together with one or more box hives, or hives of any kind, with fixed combs, carted to said station by the owner at his or her expense, i. e., give the owner of diseased bees the choice of carting their bees thither and home again when cured, as well as paying the cost of curing, if any, or having them burned up on the spot. Then we would know just what we were doing.

The Marketing Problem.

It seems that Ireland, as well as England, has had a bumper crop of honey this year, and now doesn't know what to do with it. A little organized effort, brothers, will do wonders in developing a marketing system. When we remember that probably not more than one out of fifty producers are salesmen, we can hardly expect the best prices so long as each is trying to do his own marketing irrespective of the others. Read what the Editor of *The Irish Bee Journal* has to say:

The letter from Miss S., Essex (page 89) and our comments thereon last month, have brought us many communications from aggrieved honey producers. These all admit that they have had a bumper season, but they are up against the marketing problem, and most of them are at a loss to know what to do with their bumps. The Devonshire cottager, who made £2, 18. 4d per hive, but had to sell at 7d. per lb, has many companions in misfortune. A beginner, who started with a cheap stock this year, tells us that he is disappointed with his profits; he took off six crates of sections, gave away four and sold two; net results 24/6. That is sad. Yet if he gives away his milk and calves also, stock raising will pay him no better than beekeeping. There is no satisfying some folk. We like the man with the wooden leg who daily congratulates himself upon the fact that since his accident he has fewer corns to pare. Life is made up of compensations.

Introducing Queens Without Destroying Cells.

For years we have been taught to destroy all queen cells before attempting to introduce queens. J. L. Byer tells us in the *Canadian Bee Journal* that for years he thought the same, but now he says:

As to tearing out all cells before allowing the queen her liberty, up till this fall I fully believed in the necessity of such a method of procedure, but at the present am more than sceptical as to its being the best thing to do. If bees are inclined to rob, certainly leave the cells

alone, as the excitement caused by going through a colony at a time like that is more dangerous to successful introduction than the cells that may be in the hive. * * * With regard to cutting out queen-cells, no less an authority than Geo. B. Howe had written me previous to my leaving home, saying that when the bees were ready to accept the queen it would be necessary to tear down the cells, and in this case, at least, I found that he was correct. In front of many of the colonies, after six days, I found cappings of queen cells at the entrance, and curiosity compelled me to look into a lot of these hives, against my better judgment, and in every case, the torn-down cells were in evidence. Fifteen queens were run in the colonies in the evening, after thoroughly smudging with tobacco smoke, and in this case I lost one queen—the first one attended to in the evening. Evidently not enough smoke was used, or else it was too early in the day. It is only fair to say in conclusion, that since coming home I have tried to introduce 18 queens and have lost two. In this case the cages were of the wide style, and were laid on top of the combs. Not a particle of honey coming in may help to explain the loss—anyway, two queens were killed, explain it as you will.

"Go to the Bee, Thou Sluggard."

D. M. MacDonald, in the *British Bee Journal*, bids us go to the bee for lessons in system. System in the apiary is something there is too little of, and yet something that means dollars and cents to us if adopted. We read in part:

Go to the ant, thou sluggard, and learn from that tiny insect how to labor. Go to the bee-hive, thou bee-keeper, and learn from the system of labour and government there displayed how thou mayest carry on thy occupation with a minimum waste of time and expenditure of tissue. System is the secret of success. No bee has to waste time discussing who is to carry out certain operations, or each tiny toiler sees where work is required, and straightaway goes and does it with all its might. Some would fain try to convince us that the operation of fanning is carried on in a haphazard way, and that there is no regular relieving of the guards or fanners. That is the result of man's

shortsighted and unscientific observations. Relief comes, or the fanner, when worn out by its toilsome labors, clears out, but only to be replaced by several successors each eager to step into its comrade's place; when the necessity arises fanners are always there. In like manner, however long the guards may be on duty, a sufficient number will always be found in position, and in the right position to spy strangers, and evict them if necessary. Nay, if summary execution is to be meted out to intruders the two, three, or half-a-dozen evicting the would-be intruder have their places at once filled by relief guards. The same principle holds good in all the internal working of the hive. Every operation is carried out expeditiously and well.

System in agricultural operations leads to economy of both time and money. The labor is lightened, more of it is overtaken in a given time, and the necessary operations are carried out at the right time—not half-a-day, half-an-hour, or even half-a-minute too late. In bee-keeping this feature cannot be over-estimated. Do things, but do them at the right time. Solomon Slow had the knack of doing everything five minutes too late. This in apiculture would mean for most operations that the time had passed for the necessity of carrying out the work. Spending time over the operation would bear comparison with the proverbial process of trying to gather up spilt milk.

Removing Supers and Uniting Colonies.

Brother Doolittle gives two little kinks in *Gleanings in Bee Culture*, that are worth noting. The first one is one of those things we have done so long that we supposed everybody knew it, and yet it is probably new to a great many:

"When removing supers by the cold plan, unless the supers are full or partially so of section honey, wait until there is a cool or cold spell, when the mercury sinks nearly to the freezing-point, when the bees will have congregated in the brood-chamber. At the end of this cold spell there is generally a morning when there is a frost, when, by rising early, all of the supers may be taken off free from bees, requiring only

one lifting of the super, with not a single comb to handle separately. I have practiced this plan for years, but I do not remember to have told any one about it before, neither do I remember having read about it for several years. In this way the whole apiary can be gone over, and all supers taken off in an hour or so, and these supers collected and wheeled into the storehouse, usually before the bees begin to fly. Then by delaying until cool weather comes, one may avoid the possible development of eggs from the wax-moth among the combs after they are deprived of the bees."

The second has often been mentioned, but the idea of uniting three or more colonies in this way may be new to many.

"The old way was to move the colonies toward each other a little each day so that the bees would mark anew at each flight, thus saving a loss by their going back to the old location when finally brought together and united. But few use that plan now. After a cool, cloudy, windy, or rainy spell, bees generally mark their location more or less, especially in the fall or early spring. At such a time a newspaper should be spread on top of the hive containing the colony where one wishes the united colony to stand, and one of the other weak colonies should be placed on top of it, then another newspaper on top of this, and the third colony on top of this paper, and so on, according to the number to be united. When it grows warmer the bees will eat or gnaw holes through the papers, and the whole will become one colony, flying out through the entrance of the lower hive, marking this new location as does a new swarm, owing to the mixup of bees before their flight. In a week or two, select combs containing sufficient stores for winter, and remove all other combs. The colony should be confined to one hive for winter."

Ripening Honey Artificially.

When everybody is shouting for a thing, it takes nerve to get on the other side of the fence. It is much easier to go with the crowd, even though the crowd is on the wrong track. We were much interested in what I. Hopkins says

in *Gleanings in Bee Culture*, regarding the ripening of honey. We read in part:

We all remember what a commotion was created in the bee-world when the late E. W. Alexander gave, early in 1906, in *Gleanings*, his method of extracting uncapped honey. Yet not one of the opponents of his system ever put forward one definite reason for his opposition. I have watched very closely all that has been written against the system, for I have been particularly interested in all that could be said for and against it, as I first adopted it in 1883, and carry it out still at our government apiaries. Out of all the correspondence there has been nothing but vague statements that honey can be properly ripened only within the hive. The opponents of the system hold that honey ripened outside is inferior. I would ask what grounds they have for their assertion. Against their loose statements we have the experience of Mr. Alexander, who was one of the foremost men in the bee-keeping world.

I have also proved by practice, to my own satisfaction, the great advantages of the system, and that absolutely no difference can be detected between honey ripened outside and inside the hive. Nevertheless I should like to learn that chemical investigation of the matter is likely to be carried out. I am of the opinion that the chief factor in ripening honey, aside from the possibility of some chemical change in the sugars going on, is the ridding it of its surplus moisture, which can proceed outside as well as inside the hive in suitable surroundings.

At one time I used large storage tanks, holding 200 gallons each. I am not sure but I would use them again. These stood right out doors in the sun, with a chance for ventilation. The thin honey would raise to the top, and the thicker could be drawn from the bottom. The honey put in these tanks was not all sealed before extracting, and I have had prominent bee-keepers sample the honey and they pronounced it first class. It went to a fancy trade, giving the best of satisfaction. These tanks, like everything else, if used must be used with judgment, and not too much expected of them. Let's hear from others who use them.

Honey Quotations

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

CHICAGO—There has been a good trade in honey during the past two weeks and the receipts are quite heavy. Prices remain at 17c to 18c for fancy, and from 1c to 2c less for the No. 1 grades. Amber is in large supply and difficult to sell, ranging at from 12c to 15c per lb. Extracted white 8c to 9c per lb., amber 7c to 8c per lb. according to kind and quality. Beeswax is steady at 31c to 32c per lb. **R. A. BURNETT & CO.,**
173 W. S. Water St.

DENVER—Warm weather and an abundance of fruit has had a depressing influence on the local honey market and for that matter also on the carload business. We are quoting our local market in a jobbing way as follows: No. 1 White comb, per case of 24 sections, \$3.15; No. 1 Light Amber \$2.92, and No. 2, \$2.70; White extracted, 9-10c; light amber, 8-9c; amber strained, 7½c. We are paying 25c cash and 27c in trade for clean yellow beeswax delivered here.

THE COLORADO HONEY PRODUCERS ASSN.,

Oct. 18. F. Rauchfuss, Manager.

TOLEDO—There is not much change since our last quotations, except that the demand for honey both comb and extracts has increased, and will as the season advances, as the fruit is about gone, and honey will sell well until about Dec. 1st, but the shipments are coming forward more freely and are equal to the demand, owing to the prevailing prices, sales are made in a retail way as follows: No. 1 to Fancy White 18c, very little to be had; Light Amber, 15c to 16c; No. 2 grades of White bring from 16c to 17c per lb.; no demand for dark grades. Beeswax is steady at from 30 to 33 cents. Extracted is in good demand and white honey sells at 10c per lb. Amber and off grades sell at from 7½ to 8½c.

Oct. 21. S. J. GRIGGS & CO.

BOSTON Fancy and No. 1, white comb honey, 17c to 18c. Light amber, 16c. Amber, 15c. Fancy white extracted, 11c to 12c. Light amber, 10c. Amber, 9c. Wax, 30c.

BLAKE-LEE CO.,
Oct. 23. 4 Chatam Row.

NEW YORK—The demand for comb honey is good, especially for all grades of white. Receipts, however, on account of the short crop are rather light. We quote: fancy white, at from 16c to 17c per pound; No. 1 at from 14c to 15c per pound; No. 2 at 13c per pound; mixed and buckwheat at from 10c to 11c per pound. **EXTRACTED** also in good demand, especially the lighter grades. We quote: California water white at 10c per pound; white at from 9c to 9½c per pound; light amber at from 8c to 8½c per pound; white clover and basswood at from 9c to 9½c per pound; buckwheat, 7½c per pound.

Beeswax quiet at 30c per pound.
HILDRETH & SEGELKEN,
Oct. 21. 82 Murray St.

CINCINNATI—There is considerable honey coming in. Strictly fancy comb honey is selling from 16½c to 18c. Amber Comb Honey is a detriment to the honey business, and we discourage its sale for the reason buyers buy it just because of price and are unconscious of the great harm they are doing to the trade in general. Extracted honey is plentiful, while the price holds up pretty well, there is a world of it to be bought. We are selling amber extracted honey from 6c to 7½c according to the quality and quantity purchased, and for strictly fancy water white fancy table honey, 10c and 11c per pound. We are paying from 28c to 30c per pound for bright yellow beeswax delivered here.

THE FRED W. MUTH CO.,
"The Busy Bee Men."
Oct. 21. 31 Walnut St.

CINCINNATI—The market on comb honey is fair to good; retails single cases \$4.00, jobbing \$3.60 to \$3.75 according to quantity, that is for No. 1 white comb honey; no demand for off grades or No. 2. Extracted dark in half barrels 6½c, light amber in 60-lb. cans 8½c, white table honey 10c to 11c. Beeswax fair demand \$33.00 per 100 lbs. Above are our selling prices and not what we are paying.
Oct. 21. **C. H. W. WEBER & CO.**

KANSAS CITY, MO.—The receipts of honey are more liberal both comb and extracted; the demand fair. We quote No. 1 white comb honey, 24 sections per case, \$3.50; No. 2 white comb honey, 24 sections per case, \$3.25; No. 1 amber comb honey, 24 sections per case, \$3.25; No. 2 amber comb honey, 24 sections per case, \$2.75-\$3.00. Extracted white per pound, 8½c-9c; extracted amber per pound, 7c-8c; beeswax per pound, 25c-28c.

C. C. CLEMONS PRODUCE CO.
Sept. 21st.

"THE REVIEW" ADVERTISEMENTS BRING RESULTS

North Detroit, Mich., Oct. 10, 1911.
E. B. Tyrrell:

Dear Sir:—Do not run my add. again, as my bees were sold and shipped today.

Very truly,
CHAS. C. SCHNEIDER,

Classified Department.

Notices will be inserted in this department at ten cents per line. Minimum charge will be twenty-five cents. Copy should be sent early, and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

FOR SALE

SUBSCRIPTIONS taken for magazines at club rates. Bargain list free.

G. OXLEY, New Vienna, O.

FOR SALE.—Amber and buckwheat honey in new 60-lb. tin cans.

C. J. BALDRIDGE, Homestead Farm, Kendaia, N. Y.

APRIL-HATCHED INDIAN RUNNER DUCKS, fawn and white; \$2.00 each; \$3.50 a pair; \$5.00 per trio. White-egg strain.

KENT JENNINGS, Mt. Gilead, Ohio.

200 TESTED RED CLOVER AND GOLDEN YOUNG QUEENS; safe arrival guaranteed. 50 cents each.

EVANSVILLE BEE & HONEY CO., Evansville, Ind.

FOR SALE.—Water white and light-amber alfalfa and light-amber fall honey, put up in any size packages. First class.

DADANT & SONS, Hamilton, Ill.

FOR SALE.—Empty second-hand 60-lb. cans, as good as new, two cans to a case, at 25 cts. per case.

C. H. W. WEBER & Co., Cincinnati, O.

FOR SALE.—Choice winter apples in barrels direct from the grower.

F. E. SCHRIVER, Rt. 3, Grafton, O.

POST CARDS, 10 for 10 cents; 30 for 25 cts. Handsomely colored embossed Birthday, Thanksgiving, Christmas, New Year's, Landscapes, Flowers, Fruits, Views.

HAHN, 254 West 15th St., New York.

GOLDEN ITALIAN QUEENS that produce golden bees, the brightest kind. Gentle, and as good honey gatherers as can be found. Each \$1, six \$5; tested \$2.

J. B. BROCKWELL, Barnetts, Va.

SPECIAL OFFER.—One Dollar Collection of Hardy Flowers: 2 May Pinks, 2 Moss Pinks (creeping Phlox), 2 Cone Flowers, 2 Sweet Williams, 2 Coreopsis Grandiflora, 1 Oriental Poppy, 1 Chrysanthemum. W. H. THOMAS, Loantaka Nurseries, Office 36 Pine St., Morristown, New Jersey.

TIME TO PLANT will soon be here. We sell direct to planter at lowest prices for the best stock. Apple and Cherry Trees 8c. Peach 4c and up. Send for Catalogue, it's valuable to you. ERNST NURSERIES, Box 2, Moscow, O.

FOR SALE.—Absolutely pure California sage extracted honey; several cars white and light amber, in 60-lb. tins, two tins to a case. Write us for samples and prices.

Rather Bros., Managers,
HEMET VALLEY BEE-KEEPERS' ASSOCIATION,
Hemet, Cal.

WHITE WYANDOTTES.—Useful and beautiful. The kind that weighs, lays and pays.

A. FRANKLIN SMITH, Ann Arbor, Mich.

R. C. B. LEGHORN COCKERELS.—Kulp strain, the best there is, \$1 to \$3. Eggs in season.

C. W. WAITE, Gobleville, Michigan.

"EGGMAKERS."—S. C. Brown Leghorn Cockerels. State wide reputation. I can suit you. Write me.

WM. J. COOPER,
Mt. Pleasant, Mich.

BLUE BELL BARRED ROCKS.—Prize-winners in Chicago. Handsome and profitable. Young and old stock for sale at low prices.

LAKE RIDGE FARM, Levering, Mich.

LILLIE FARMSTEAD POULTRY.—B. P. Rocks, R. I. Reds, W. Wyandottes and S. C. W. Leghorn eggs for sale. 15 for \$1; 26 for \$1.50; 50 for \$2.50.

COLON C. LILLIE,
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NOW WRITE W. J. ROSS, Rochester, Mich., for those beautiful sable and white and tri-color Collie Puppies. Finest breeding, natural workers.

RINGLET BARRED PLYMOUTH ROCKS.—Fine, healthy, well barred cockerels and pullets at right prices.

R. J. SCHLONEGER, Pigeon, Mich.

THOROUGHbred S. C. BROWN LEGHORNS.—A fine lot of Cockerels at right prices.

LEWIS T. OFFENLANDER,
R. No. 4, Lansing, Mich.

SILVER, Golden and White Wyandottes of quality, young stock after November 1st. Fine circular free. A few white roosters.

C. W. BROWNING, Portland, Mich.

FOR SALE.—160 a. farm in German Lutheran settlement. Price \$7,500.00, including inventory and crops. EMIL KREBS, Avery, Texas.

FOR SALE.—880 acres of good farming land with good improvements, close to the city of Dillon. Very reasonable, on easy terms. Address

H. J. SELWAY, Dillon, Mont.

HONEY.—One 30-lb. can best clover honey \$3.45; 2 or more cans, 11c per lb.; 60-lb. cans \$6.30 each. Send for Price List.

M. V. FACEY, Preston, Fil'm'r Co., Minn.

RHODE ISLAND RED COCKERELS that are Red. Have spent three years line breeding. These are the first I have offered for sale.

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273 Euclid Ave. East, Detroit, Mich.

WANTED

WANTED.—A wax press or extractor of any kind. F. T. HOOPER, E. Downingtown, Pa.

WANTED.—Comb, extracted honey, and beeswax.

R. A. BURNETT & Co.,
173 W. S. Water St., Chicago.

WANTED.—To buy amber and dark extracted honey; to sell, second-hand 60-lb. cans.

A. G. WOODMAN Co., Grand Rapids, Mich.

WANTED.—To exchange Root bee-supplies either for money or honey. December cash discount, 4 per cent. Catalog free.

E. W. PEIRCE, Zanesville, O.

Be A Power Owner Talk It Over With Your Wife

SEE whether your wife doesn't agree that it's unwise to keep on paying wages for farm help, when this low-priced **Perfection** engine will do the work of three hired men. This standard **Perfection** kerosene portable engine is built in Detroit by experienced automobile engineers, and along lines conceded by experts to be correct. The **Perfection** can be operated on any engine fuel, but it is the only successful engine that can be economically run with ordinary kerosene. With gasoline prohibitively priced (from 6 to 16 cents more than kerosene) due to the great automobile demand, you will at once see the saving this **Perfection** engine is to the thousands of owners all over the world.

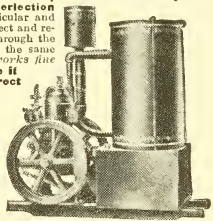
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If you are in doubt about the kind of engine to buy, or the quantity of power you require for the amount of work to be done, simply write your questions on a postcard and mail it to our Chief Consulting Engineer, and your questions will all be answered absolutely free. Our staff of mechanical, marine and stationary engineers and designers will tell you everything you wish to know about any engine made. Before you buy any make of engine, write for free information. Let our engineers tell you how to make a cheap transmission lay-out that will help you to run several machines at one time with a single engine. Address your postal like this—

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Standard hives with latest improvements, Danzenbaker Hives, Sections, Foundation, Extractors, Smokers, in fact everything used about the bees. My equipment, my stock of goods, the quality of my goods and my shipping facilities cannot be excelled.

PAPER HONEY JARS

For extracted honey. Made of heavy paper and paraffine coated, with tight seal. Every honey producer will be interested. A descriptive circular free. Finest white clover honey on hand at all times. I buy beeswax. Catalog of supplies free.

WALTER S. POWDER, Indianapolis, Ind.
559 Massachusetts Avenue.



MEXICO AS A BEE COUNTRY

B. A. Hadsell, of Buckeye, Arizona, one of the largest bee-keepers in the world, has made six trips to Mexico, investigating that country as a bee country, and is so infatuated with it that he is closing out his bees in Arizona. He has been to great expense in getting up a finely illustrated 32-page booklet describing the tropics of Mexico as a Bee Man's Paradise, which is also superior as a farming, stock raising and fruit country, where mercury ranges between 55 and 98. Frost and sun-stroke is unknown. Also a great health resort. He will mail this book free by addressing

B. A. HADSELL, Lititz, Pa.

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Twenty percent. discount on hives, supers, frames, section-holders and sections—everything in the line of woodenware. Send in your list of what you want.

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146-160 Newton Ave.,
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Bee Keepers will save money by
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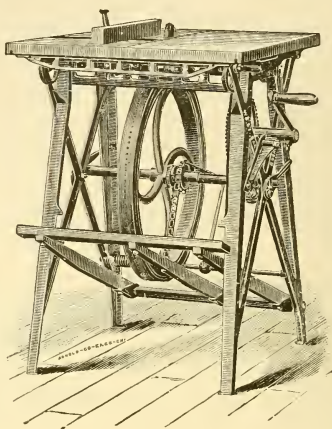
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A New Edition

The new edition of **ADVANCED BEE CULTURE** is now ready for delivery.

So many changes have been made that it is almost a new book. Quite a number of chapters have been dropped entire while entire new chapters have been added. Many have been largely rewritten. The most new matter has been added on the management of out-apiaries, and the production and sale of large quantities of extracted honey at an advanced price.

Some of the pictures have been dropped, and many new new ones added.

The number of pages has been kept about the same, but the publishing facilities of the A. I. Root Co. have allowed the price to be reduced to an even \$1.00, postpaid. Review one year and the book for only \$1.90.

E. B. TYRRELL, 230 Woodland Ave. Detroit, Mich.

Honey Honey Honey

We Want to Buy
We Want to Sell

We are always in the market for Honey, both comb and extracted, if quality and price justify. Should you have any to offer, let us hear from you. If extracted, mail sample, state how it is put up and lowest price; if comb, state what kind and how packed.

If in the market for honey, write for prices.

Cans Cans Cans

We have a surplus of second hand, five gallon cans, two to a case, as good as new, used but once. Offer same, while they last, at 25c per case f. o. b. Cincinnati. Order quick, if you want any.

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Are made right in the timber country, and we have the best facilities for shipping; DIRECT, QUICK and LOW RATES.

Sections are made of the best young basswood timber, and perfect.

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Ask for our catalogue of supplies free.

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**THIS BRAND MEANS
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TAKE NO OTHER



**30 DISTRIBUTING HOUSES
SEND FOR FREE ANNUAL
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G. B. LEWIS CO.
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Dittmer Process Comb Foundation

Is Tempered and Milled to an exact firmness to satisfy the peculiar demand of the Honey Bee.

Remember, we give a very reasonable Discount for early Fall Orders.

All other Bee Keepers' Supplies in Stock.

GUS DITTMER CO.,
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FREE BOOKLETS

FOR BEE-KEEPERS

Make good use of your spare time this Winter. Get a better honey crop by fitting yourself to be a better bee-keeper. The booklets named below are sent, free of charge, to our friends who request them. Each is of considerable value to the apiarist who is interested in the particular phase of the work treated. You may have all of them, if you desire. Perhaps you have a friend who would like copies, too.

Here are a few titles:

FACTS ABOUT BEES,

or the Danzenbaker Hive and its management. 60 pages illustrated from photographs.

THE BUCKEYE HIVE.

Wintering bees in the double-walled hive. 76 pages—just published.

BEE-KEEPER AND FRUITGROWER.

How and Why their interests are mutual. New edition, 24 pages.

HOW TO PRODUCE EXTRACTED HONEY.

Explains in detail complete process of extracted honey production. 44 pages—illustrated.

Other interesting booklets and the leading text-books on bee-keeping are listed in our catalog of bee-keepers' supplies. Better refer to these and "study-up" in your spare moments.

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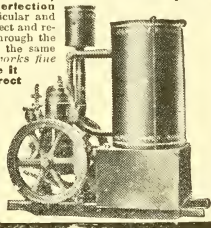
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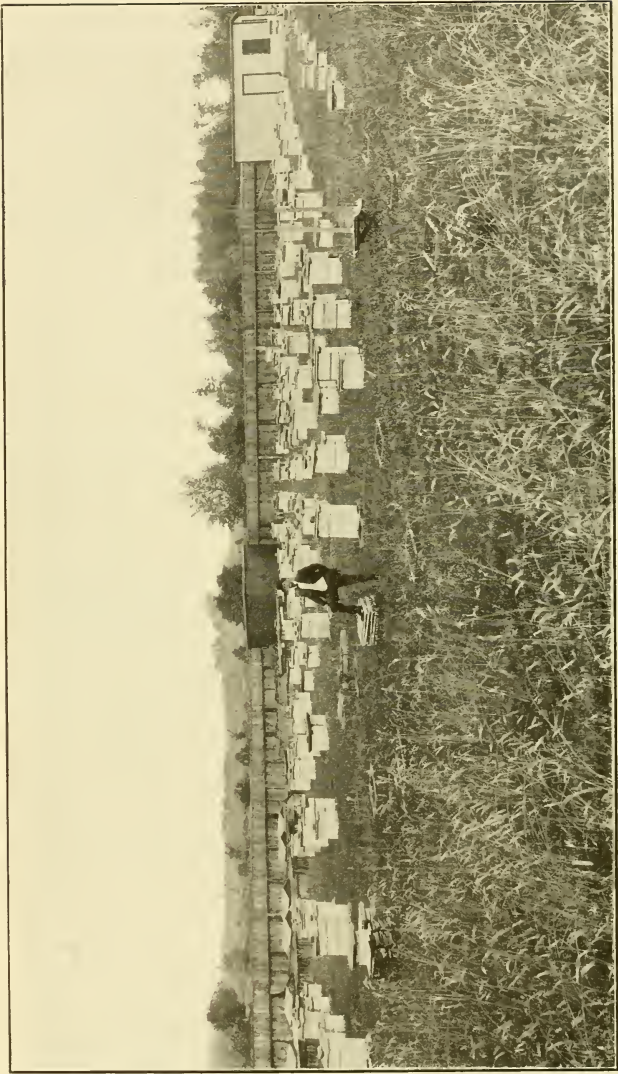
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The Bee-Keepers' Review.

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E. B. TYRRELL, EDITOR AND PUBLISHER

OFFICE OF PUBLICATION - - - 230 WOODLAND AVENUE

VOL. XXIV.

DETROIT, MICHIGAN, DECEMBER 1, 1911.

No. 12.

The Most Profitable Year of a Twelve-Hundred Colony Bee Keeper.

M. H. MENDLESON.

IN 1897 I made the most money from my bees. I had then about twelve hundred colonies. I produced both comb and extracted honey. The extracted honey was sold and shipped to various states in the Union. I have not my record here, but I think I secured from 6 to 7 cents for the extracted and 12½ cents for the section honey. A great part of this section honey brought me 15 cents. The bulk of my comb honey was sold to one fancy grocery company at Los Angeles. As I believe in thorough ripening of my honey I have a more ready sale for it at advanced prices. One firm bought indirectly the bulk of my extracted honey for years, until lately. Of late years Mr. I. J. Stingham has bought by the carload, and whenever I had a good year the bulk of it is sold to a firm at Los Angeles.

CONDITIONS FOR GOOD YIELDS.

The conditions for our good flows are wet winters with continued late spring rains, favorable warm springs and summers and clear weather.

Very seldom we miss having a good honey flow when the above conditions exist. Of course our bees must be in prime condition for these good results, and there is not any reason why we should not have any of these good flows in the future, unless some unforeseen blight of the sages or fire destroys the source of the honey flow.

I have had a much larger flow since that time from 1,870 colonies, but I lacked skilled help to care properly for the bees and crop, consequently I had but less than a half crop, or 101 tons, which should have been from 225 to 275 tons by skilled assistance. You see this 101 tons is but a trifle over 108 pounds to the colony, which should have been between 200 and 300 pounds per colony, which is not beyond reason here on the best ranges which I have and a good equipment.

PAST FEW YEARS VERY POOR.

The past number of years have been a damper on our business. Very poor. To make the business pay here bee-men should have sufficient good land

to farm during these bad years. There are a few localities where bees pay nearly every year, *but they are the exception*. The bulk are otherwise, unless with some side issue, and I should not advise eastern bee-men to rush here, only to be disappointed.

In conclusion I will state that I have a better equipment and am prepared for better results, should this winter prove favorable.

Ventma, Calif.

[Mr. Mendleson needs no introduction to the readers of the REVIEW. They at once recognize him as one of the leading bee-keepers of California. He is a recognized authority. Young men who are readers of the REVIEW, and who are considering the question of bee-keeping as their future business, can get much encouragement from reports like the above, for after all "what has been done can be done again," and that doesn't mean that it is *all* that can be done, either. Young man, wake up. Beat the above record. You can do it.]

"Keep More Bees" Is Good, Sound Doctrine.

J. J. WILDER.

THE doctrine, "More Bees," has been preached for considerable time and it is about time for us who have heeded to testify whether the doctrine is sound or not.

I do not know that I am the proper one to write under such heading or not, but allow me to say that I have launched out considerable. But before I go further with this subject let me say that I am delighted with bee-keeping and I like the work in all its branches. I could not and would not be anything else but a bee-keeper under such conditions as surround me. In other words, I am suited in an occupation and happy therein. I mention the above for it might have some weight on what I shall say.

RETURNS.

This is the most important subject under "More Bees." Up to date I have not heard of anyone in the South who has invested his hard-earned money in bees and lost it, but there may be a few bee-keepers who are not so well satisfied over the returns from their bees. Yet they admit that they could bring about better conditions and thereby greatly increase returns. As for me, I am well satisfied over the returns from my bees. They have paid me well for all the time I have expended on

them or the capital I have invested in them; but I have not made a fortune at the business nor has any other bee-keeper so far as I know, although some of us have accumulated considerable during our bee-keeping life, making loans, investing in real estate and "More Bees," etc. This is certainly encouragement on the financial side of our business, but shall or will we stop here and say, as has been said, that bee-keepers are a class of people who do not care for wealth, and are just contented with a living and perhaps a little more? Why can't we take hold and push our business to the goal, as do others in businesses that have no greater returns than bee-keeping? By living economically, and investing, and operating our business economically we can make rapid progress and soon have a business established, the income from which would be great. There can be no doubt about this.

LABOR.

This is also a problem, and can it be solved? From our experience it would be a little difficult, but it *can* be solved. As we see it, it could be done by hiring boys about grown, or young men, to do the necessary work, and as one appeared talented and took special interest in the work assign such a one

all the bees he could properly care for, and a little help when necessary. I have tried most all kinds of labor and in almost every way, and the above suits me best, and I believe is the nearest solution to the problem of labor. Of course a lot of the boys will not give satisfaction. Some will not remain with you any longer than when the rush is over, and, of course, it will be well to let such boys go. But there will always be enough reliable and sufficiently experienced to take hold at the head of the business and keep it going until new boys are needed for next season's rush, etc.

LOCATIONS.

Is it possible to find a suitable location for such extensive business? I don't think this would be much of a

problem, as we have almost unlimited unoccupied territory almost anywhere, and it lies surrounding a point from which it could be operated to best advantage.

Summing up the whole thing, "More Bees" must be good, sound doctrine for present and future.

Cordele, Ga.

[Mr. Wilder is one of the prominent bee men of the south. His advice to hire young men shows that he "has been through the mill. A young man is always more receptive to instruction than an older one, and as he has not been discouraged by failures he is full of optimism. He must be governed by encouragement. He should never be criticized, although his mistakes must be pointed out, and he must be made to recognize that "you are boss." Respect his judgment and he will work for you like a nailer.]

This Man Believes Thousands of Dollars are Lost Each Year by Producing Comb Honey Instead of Extracted.

P. C. CHADWICK.

THE subject of relative profits in the production of comb and extracted honey being agitated more or less at the present time, I feel competent to give some opinions, for, after all, we have only opinions to offer, no matter how hard earned or at what cost we have gained them. Others who have not been over the road of experience cannot always see as we would have them.

I believe the money lost each year working for comb honey would be sufficient to equip every apiary in the United States fully for extracting. Not money literally lost, but time and supplies, which we all know have a money value, to say nothing of flat failures in comb honey where enough extracted could have been secured to at least pay expenses.

Thousands of sections are annually soiled to such an extent that they can-

not be used the following season, that never return the bee-keeper a cent. Tons of honey remain ungathered because the flow is not sufficient to induce comb building in sections, and this, to me, seems a loss beyond the realization of many who are struggling in the effort to make comb honey pay.

FAVORABLE YEARS.

There are years when comb honey can be secured in quantities in localities that are favored by conditions, but under those same conditions how the old extractors would hum and what a quantity they would store. Few localities are so favored every year, and the extractor may be your best friend in the years following when the flow is light, while it is doubtful if there would be much advantage over the extracting process, with comb honey, in your best seasons. I can look back at my experi-

ences in the east in years gone by and see where I might have turned failures into profit with the aid of an extractor. I recall the early honey flows, the intermittent spurts from time to time, and the slow fall-flows that could have been saved with extracting combs, but was all lost to me, a comb honey producer.

1905 A SPLENDID YEAR.

In the year 1905 we had one of the best and longest honey flows California ever had and, considering the poor condition of the bees early in the season, the yield was phenomenal. We had ninety colonies in one apiary in poor spring condition when the honey flow opened in earnest, and time was lost making the start, but the season was "great" for a time for both comb and extracted, either of which could have been stored with profit for a few weeks, but slacked up too much for comb honey, while the extracting season lasted for months with a slow, steady flow that gradually filled the combs. Our last extracting was done on September 12, at which time we took off thirty cases, and still they continued until every comb was filled to the limit.

We finished the season with 180 cases from this apiary of 90 colonies spring count.

ONE COMB-HONEY APIARY NOT PROFITABLE.

I know of but one apiary near here that is run for comb honey, and it only goes to prove everything I have said above, for while we who have followed

extracting have secured more or less honey, this apiary in relative profits is far behind, though well managed.

The only plan by which I can see a profit in comb honey is to first extract and then feed back, forcing the rapid completion of every section, and even then, from my own experience, I have doubts as to greater profits, unless there is a greater advance in the price of comb honey over extracted.

I am so thoroughly convinced of my position on this matter, gained by experience, that I would never consider the production of comb honey only in connection with extracted, allowing two or three wide frames with sections in the extracting super during the height of the honey flow or the process of feeding back, as before stated.

Redlands, Calif.

[For years THE BEE-KEEPERS' REVIEW has championed the production of extracted honey. Comb-honey producers have criticised this stand, claiming it would do away with comb-honey production and cheapen the price of extracted by the increased amount placed on the market. And yet we see prominent comb-honey producers turning more and more to extracted, with the price of the extracted honey steadily advancing.

For the commercial bee-keeper there is no question in my mind as to which is the more profitable, for in almost every instance where a big success has been made in the bee business it has been in the extracted line, and yet I realize there are exceptions, and that under certain conditions the production of comb-honey should be encouraged.]

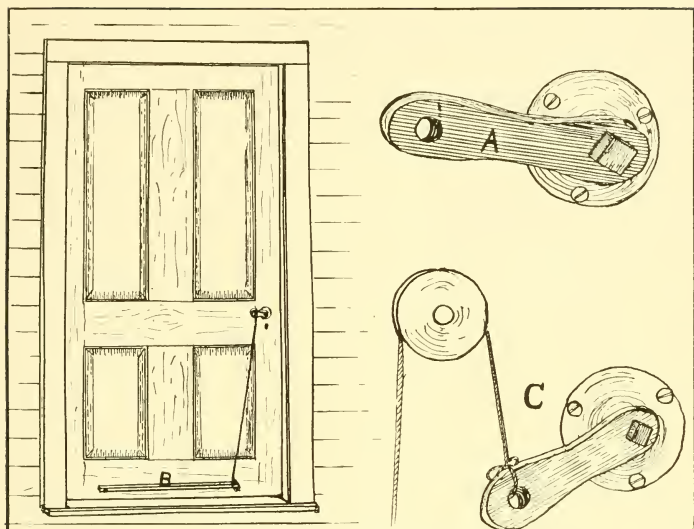
Some Simple Home-Made Appliances of Value to the Bee-Keeper.

LEON C. WHEELER.

LABOR-SAVING devices, simple in construction and cheap in cost, are what the bee-keeper is always on the lookout for, and I am pleased to add the following, which I have found of much benefit to me:

A FOOT LATCH FOR THE HONEY HOUSE DOOR.

I have taken much comfort this summer out of a simple little contrivance for opening the honey-house door with the foot instead of the hand.



Put Your Foot on "B" and Open the Door.

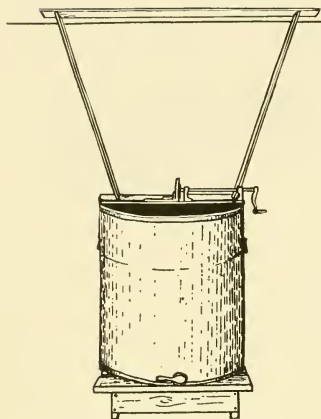
The device is very simple, and probably there are lots of bee-keepers who would have had similar ones had they known how simple it was, but, like me, they have worried along and got the door open somehow, either by holding the hive between the body and the honey-house while they thus disengaged one hand to open the door, or the more wearisome way of setting the hive down, opening the door and picking it up again; all this with a back already near the breaking point, and this for the lack of a simple device you can make yourself in twenty minutes. It will save you more than that the first day you extract.

It is made as follows: Remove the outside door knob and to take its place make a little iron, like the illustration A, fig. 1. The square hole can be made by drilling a hole of the right diameter and cutting out the corners with a three-cornered file. Fasten this in place with

the little screw you took out of the knob and attach a string to the other end just long enough to reach to the foot lever, B, fig. 1, which should hang about three inches from the floor when the door is shut. When you wish to open the door put your foot on the lever and the pull on the string turns the knob and releases the door, which swings back with the force of the slight blow you gave it when you struck the lever. If you get the levers too heavy so that the door is inclined to open of its own accord, you can remedy it by placing a spool so the string draws over it and opens the door by an upward turn of the knob, C, fig. 1.

TO HOLD THE EXTRACTOR FIRMLY TO PLACE.

For a long time I struggled along with an extractor always vibrating, especially if I failed to get my combs well balanced, or if one of the combs happened to have some pollen in it and



This Extractor Can't "Wobble."

the other didn't, it was almost impossible to keep up enough speed to clean the combs. My extractor is of the two-frame type, with wide, deep pockets to hold any size frame, whether deep or wide. These are much harder to balance than those of larger capacity.

I should probably have had one of larger capacity before this, but I do not

wish to buy until I can get a power-extractor.

I always kept my extractor firmly fastened to the platform on which it stood, but I found even this not sufficient to keep it from vibrating.

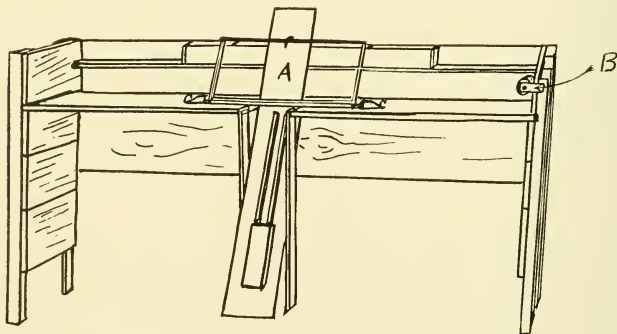
Last year and this I have been bracing my extractor from above, a kink I learned from my father-in-law, and my troubles with a vibrating extractor are at an end.

The drawing will illustrate the method of bracing. You will note the braces are set out at the top, thus bracing the extractor sidewise as well as holding it firmly down.

To protect the plaster I fasten a board to the ceiling, and the braces are then fastened to a board across the back side of the extractor, the top driven tightly into place and toe-nailed.

BENCH FOR NAILING FRAMES, WIRING, ETC.

For use in nailing frames I devised a bench, which was described and illustrated in *Gleanings* three or four years ago, but as I have made one or two little changes in the bench I will send a short description and drawing. See fig. 3.



Everything Handy for Nailing and Wiring Frames.

The bench is about five feet long and just high enough to sit comfortably with the knees under it. A hole is cut through the center of the bench and back eight inches from the front edge, and a standard four inches wide, and long enough to reach from the bench to the floor and project about a foot above the bench, is nailed in this place.

A block is nailed on this at just the right place, and when a frame is set with end of the top bar on the block the other end will be about four inches higher than the top of the bench, or just about the right height to nail comfortably. A notch is cut in the upper end of the block to admit the projection on the end of the top bar, and another smaller one for the end-spacing staple. Strips are nailed at each side just far enough so the top bar will slide between them, and these strips are notched at the bottom to admit of the side-spacers of the Hoffman frames.

The back and ends of the bench are built up eight inches above the top; and a row of boxes for nails, staples, etc., are ranged along the back, and a small open shelf left at each end. At the right a reel, B, is fastened to the bench for wire, and blocks, C.C., are fastened on the bench so that a frame set on the top bar and leaning against the projecting end of the standard, A, will be held from moving endwise. A nail is driven through the standard and bent on the end so that when the frame is in place it can be turned down and hold the frame firmly in place for wiring.

To fasten the wires I use a very small nail, which I pick up and crowd to place with a horseshoe magnet. The bench is shown with a frame in position for wiring.

A TOOL FOR SCRAPING PROPOLIS FROM COMB-HONEY SUPERS, FRAMES, ETC.

The tool I use for this purpose is a hoeshaped concern, the blade of which

is about two and a half inches across, fitted with a wooden handle. If you have never used a tool of this kind you cannot realize what an improvement it is over the narrow scrapers on the regular sized tools.

I make a hive-tool similar to the Root tool by cutting off the end of a file and hammering both ends to an edge and then bending the larger end at right angles. They should be painted red to make them easy to find if they drop in the grass.

My tool-box is a plain wooden box, 8x8x18 inches, fitted with handle for carrying. The tools are slid into places at the side of the box, and the box proper is used to cut drone-comb or scrape burr and brace-combs into.

For hive records I use broken pieces of sections and drop them under the cover. If you use quite a complete record, abbreviate. My abbreviations would quite often be absolutely unintelligible to a stranger, but as I understand them myself that is all that is necessary. As a sample, 0.6/27 means that the colony was made queenless the twenty-seventh day of June; 5 d 6/15 means I took out five frames from the broodnest on that date and replaced them with dummies.

Barryton, Mich.

[This continually watching for "short-cuts" means much to the success of any business. There is generally an "easier way" of doing almost everything we do, if we will only "think about it a little." It is the little leaks that generally kill the business. The big leaks are seen and remedied, but the little ones, because small, are considered of no importance, and thus their continual drainage goes on. Every profitable labor-saving device that you can add to your equipment adds that much toward your success.]

A Battle Between Bees and Red Ants.

C. NOEL EDDOWES.

IN your December issue I noticed an article by Mr. H. E. Hill on bee-keeping in the tropics. As I have kept bees in the tropics for about thirteen years, first as a hobby in the north of the Argentine Republic, and for five years in Jamaica for business, I feel I can say something of value on the subject.

In the first place, bee-keepers from the temperate zones seem to forget they are in the tropics and try to manage their bees as they do in the North. Experience has taught me that outside of the fundamental facts of bee-keeping, things are very different.

ANTS.

Mr. Hill speaks of ants. I suppose he refers to the red ant; if so, I will give my experience here. The red ant trouble depends very much on the race of bees you keep. I have found the golden Italians, including those of four-bands and upwards, are not as good at fighting red ants as three-band Italians or Carniolans.

I had a colony of four-band Italians; these bees when attacked by ants ran into the hive and huddled together in a frightened heap on the combs, leaving the entrance free to the ants.

Three-band Italians do not do this. Carniolans are better. If some ants get into a hive of Carniolans there is a roaring fight on at once. The best bees in my home apiary I find are a cross between Carniolans and three-band Italians.

I will give you a description of an attack of red ants on these bees and the result.

THE BATTLE.

One evening, after sundown, I went to the apiary and saw some red ants preparing for an attack. The moon-

light was falling full on the front of the hive, so I saw plainly. The ants collected very quietly around the entrance, packed shoulder to shoulder right around, until there must have been over a thousand of them, when one of the big fighting ants nipped a bee's hind leg. The bee being of the sort that is full of fight, turned round and "sailed into" that ant, the result being commotion. In an instant the bees of that hive, instead of running in as the four-band Italians did, came out and blackened the front of the hive and flight board and all the ants decamped, the place being too hot for them. Next night they tried it again with the same result and then gave it up.

BEEES KILLING QUEENS.

Another point I have learned at the expense of the loss of many queens, that is, that you cannot take honey here from the bees by the New Mexican way, for if you throw the bees onto the top of the brood frames they will get busy crowding down and balling their queen. I lost many queens by doing this till I found that it must not be done here.

I made the acquaintance of Mr. W. C. Morris when he was here, and if he studies bee-keeping in the tropics and does not try to manage bees on the same lines as he does in Yonkers, N. Y., he may hit upon some good notions, as bee-keeping in the tropics is not so far advanced as in the North.

GOOD RESULTS OBTAINED.

As to results, I have got on an average—taking good and bad years—£1 per hive net (\$5.00). I have to ship my honey away, as local consumption is practically "nil." I clear 4.7 cents per pound net.

Bee-keeping in the tropics is not a gold mine, but it will give a good living, as one man and two boys can run 400 hives, which, if properly managed

and in good locality, will give \$2,000 at the present price of honey.

Half Way Tree, Jamaica, W. I.

Is There Danger of the Italian Bee-Louse in America?

REV. GEO. W. FULLER.

LAST year I had about twenty colonies over in York state, where I lived at that time. One day while working among the bees I noticed a bee acting queer, running around over the comb, keeling over, pawing at her head and thorax, trying to sting everything about her, while other bees were unusually interested in her, as they were trying to pull something from her back. Upon close observation, for the antics of the bee interested me greatly, it being so unusual, I saw something on her thorax and fore part of the abdomen that looked a reddish-brown. I caught the bee, and by looking very closely could see five or six parasites clinging to her, which seemed to be the explanation of why she was so wrought up. I looked further in the colony and found other bees acting in the same manner and caught all I found. Some had one parasite, others had anywhere from that up to six and eight clinging to them. I looked on the alighting boards of other colonies and found several bees running about afflicted with the same pest.

Well, you can imagine a little of my curiosity. I went to the house, took down "A, B, C and X, Y, Z" and found

under the head of parasites, page 152, that there is an insect known in Italy called the "Braula" or "Italian bee-louse." I can go on farther than that in naming the pest, for such it surely is. I went to other colonies in the surrounding community and by looking on the alighting boards discovered, that the greater majority of them had the same pest. Upon examining them under the glass they look like a red crab, and have a very ferocious appearance.

I am of the opinion that A, B, C has it *wrong* when it states that no fear need be felt from the pest in this country, for I believe they have come to stay unless some remedy can be found.

I watched throughout the season and found that as the season advanced they became more numerous. I sold my place and bees this last spring and cannot tell how they are getting along this year.

Sykesville, Pa.

[I must confess that the above is a "new one" to me. Has any other New York State bee-keeper noticed anything similar? Can any of you throw more light on this question and state whether there is any prevalence of this insect in your state?]

Building Up a Profitable Business from 1 to 432 Colonies.

IRA D. BARTLETT.

EDITOR'S NOTE.—[Many older readers of the REVIEW will remember an article appearing a number of years ago, concerning a young man who had taken up bee-keep-

ing as a business in northern Michigan. His wonderful success in wintering his bees was an inspiration to all bee-keepers located in cold climates.

Recently Mr. A. G. Woodman of



No. 2. Nestled in the Wilds of Northern Michigan.

Grand Rapids, Michigan, wrote me that he recently visited the same young man, who is none other than our Mr. Bartlett, stating that Mr. Bartlett had the most beautiful apiaries it had been his pleasure to visit. I lost no time in writing Mr. Bartlett for photos and a few words concerning his beginning and subsequent experience in the bee business.

I am sure all young men who are taking up bee-keeping as a business will be interested in and receive inspiration from the success of Mr. Bartlett as given herewith.]

REGARDING THE PHOTOS.

No. 1 is my "Willow Brook Apiary" and contained at the time of taking of photo, 190 colonies.

The white building at the right is my honey house, 16x24 feet. The red one at back center is my shaving house, 12x24 ft. The winter hives will be noticed at the left along the fence. This fence is on the west and north sides of the apiary as a wind shield.

Photo No. 2 is a bird's eye view of my Deer Creek Apiary. This yard slopes gently to the southeast towards the honey house, seen at the left. The red painted building in right foreground is my shaving house.

The winter hives may be seen in the foreground. These hives are left permanently in place and are not moved as are the hives in Willow Brook Apiary. This yard contains 115 colonies of bees.

No. 3 is taken from the top of the shaving house.

No. 4 is taken from the top of the honey house.

Nos. 2, 3, 4 are of the same apiary.

THE BEGINNING.

I began to be interested in bees when a boy of 14 or 15. At that time I used to make repeated visits to a farmer friend's place on which was a nice apiary of some 50 colonies.



No. 3 It Smacks of the Flavor of the Wild Red Raspberry.



No. 4. Those Tons of Honey Make a Tempting Morsel for Bruin.

The spring I was 18, I bargained for a first prime swarm to be delivered to my father's place in town. This I paid for in work, giving \$3.00. This colony swarmed out later. I say swarmed out for it did literally leave the hive as a result of my continually molesting them. The two colonies got enough for winter and I wintered them packed in planer shavings. I increased to seven the next year and wintered them all successfully.

KEPT BEES IN TOWN.

I kept these bees in town until I reached around 40 when I moved them about $1\frac{3}{4}$ miles out to my present home, returning them to winter on a neighbor's lot which I rented. Later on as my number increased I moved my winter hives, as well as the bees to my farm. Here I built a honey and supply house and also lived in the building summers for several seasons, then later built a more commodious building 20x28, which was used up to a few years ago.

PURCHASED BEES FROM NEIGHBORS.

I purchased bees from my neighbors as fast as they got tired of keeping them and with the help of my father in financing me through, managed to live and get my supplies for another season's

crop and increase. The supplies necessary seemed to take about all I could get out of the bees for a long while. Of late it is a little easier sailing—still there is that dread disease, foul brood, to keep a continual look-out for, and a decrease in the amount of honey per colony.

There were a lot of things that I had to learn from actual experience, that cost me many a hard-earned dollar but so it is in nearly every business. I did, however, take the Bee Journals from the start, and really the first few years I read nothing to speak of except that pertaining to the keeping of bees.

KEEPING MORE BEES AT A PLACE.

The past season I decided to bunch up my bees. I kept them in four yards ere this, but bunched to but two this last fall.

I have at present some 432 colonies in the two yards and I believe that five or six hundred will do just as well. I use bee-escapes in taking all my honey and the queen excluder is considered very essential to the successful use of the escapes.

I have done quite a bit of bottling of honey, but at present sell mostly all at wholesale in 60c tins.

East Jordan, Mich.

From the Hive to the Home. Larger Packages.

GEO. SHIBER.

I WAS pleased with the position taken by the Editor in a recent issue of the REVIEW in regard to larger packages for honey than the ordinary Mason jar. Yes, I have been all through that same experience of pint, quart and two-quart glass packages for honey and my experience has been such that I have dropped everything but the ten-pound tin pail and larger size of package for the consumer. I don't enthuse much on selling to mer-

chants as a rule. I believe the honey producer should "cut cross-lots" right to the man who eats the honey. Why? Well, because it's "in the air" for one reason. We have all heard of the movement which is now on to get all kinds of products to the consumers direct. The feeling today is almost a universal one throughout the country, so in response to this feeling (and bee keepers should of all classes welcome it) I be-

(Continued on page 346)



EDITORIAL

Bee-Keepers' Review

Published Monthly

E. B. TYRELL, Editor and Publisher
Office—230 Woodland Ave., Detroit,
Mich.

Entered as second-class matter, July 7, 1911, at the post office at Detroit, Michigan, under the Act of March 3, 1879.

Terms—\$1.00 a year to subscribers in the United States, Canada, Cuba and Mexico. To all other countries postage is 24 cts. year, extra.

Discontinuances—The Review is sent until orders are received for its discontinuance. Notice is sent at the expiration of a subscription, further notices being sent if the first is not heeded. Any subscriber wishing the Review discontinued, will please send a postal at once upon receipt of the first notice, otherwise it will be assumed that he wishes the Review continued, and will pay for it soon. Any one who prefers to have the Review stopped at the expiration of the time paid for, will please say so when subscribing, and the request will be complied with.

Advertising Rates on Application.

A Merry Christmas to all Review readers.

"If I were a cobbler, I'd make it my pride,

The best of all cobblers to be;

If I were a tinker, no tinker beside

Should mend an old kettle like me.

But whether a tinker or whether a lord,

Whatever my station may be,

Determined to play second fiddle to none,

I'll climb to the top of the tree.

—Thayer's "The Way to Succeed."

A Correction.

On page 319, first column, tenth line it should read: "It would *not* be necessary to tear down the cells." The word "not" in some way was left out.

Kansas State Bee-Keeper's Convention.

This Convention was held Nov. 27th and 28th, at Manhattan, Kans., but the notice did not reach me in time to publish in the November issue. We shall be interested in learning of the success of the meeting.

Death of Mr. J. B. Hall, of Woodstock, Ontario.

I was very sorry to learn at the Toronto Convention, of the death of Mr. J. B. Hall, of Woodstock, one of Canada's foremost bee men. His funeral occurred Monday, November 13th, but I did not learn the exact date of his death. Resolutions of condolence were passed at the Toronto Convention.

Pecos Valley Bee-Keepers' Convention.

A program for this convention reached me too late for the November REVIEW. The convention was held Wednesday and Thursday, Nov. 8th and 9th, at Hagerman, N. Mexico, and a very interesting program was prepared. We trust the Secretary will send us a brief report of any important action taken at that meeting.

Get Your Reports in Early.

Several interesting reports reached us too late for last month's issue. They should reach this office not later than the 20th to 23th of the month preceding date of publication. The REVIEW is mailed the first of each month, or as near that as it is possible to send it. Sometimes it is important to mail it on the exact day, but it is very seldom that it will be more than a day or two late.

What Are Pure Italian Bees?

During one of those "between session" visits, Mr. Geo. B. Howe, of Black River, N. Y., told me at the Ontario Convention that he did not consider either a very dark or a very yellow Italian bee as being pure. He claims that they should show just three bands, and a variation either way is a mark of impurity. If I remember correctly he said that he could take the regular Italian bee, and in three seasons breed them back to the black bee. If I am wrong Mr. Howe will please correct me.

Honey from Clover One Year Old.

This fall has been one of excessive rains throughout the clover belt. It has resulted in a mass of new clover plants springing up, and now the interesting question is, will these plants produce honey next year?

For a good many years we have heard much about clover not producing honey the first year. Never before in my experience has there been such a chance to prove the statement true or false as there will be next year. The extreme drought during the summer killed practically all the old clover plants, leaving us with nothing but young plants from which to get our next year's clover crop. If we get a clover crop next year it will be pretty conclusive evidence that clover one year old will produce honey.

National Committee on Legislation.

A letter received from President Geo. W. York states that he has made the following appointments as members of the Committee on Legislation as per instructions given him at the Minneapolis Convention: J. H. M. Cook, 70 Cortland street, New York City, and N. W. Saunders of Rockville, Maryland, to act with Wm. A. Selser, 10 Vine street, Philadelphia, Pa.

This committee will represent the beekeepers in matters of legislation which

may come before the National Government. They may also propose such measures as are of importance to beekeepers.

That Ontario Convention at Toronto.

It was certainly an enjoyable affair. There was a splendid attendance from among its 470 members. Besides myself there were Dr. E. F. Phillips of Washington, D. C., Foul brood Inspector Chas. Stewart, of Johnstown, N. Y., and O. L. Hershiser of Kenmore, N. Y., from the states. The first three contributed to the program.

A great deal of the sessions was taken up in the discussion of foul brood, both American and European. Some valuable information was brought out. In addition some time was devoted to the discussion of co-operation and organization. Then there was that opportunity to grasp the hands of those "big guns" among the Canadian bee-men, and those pleasant little visits "between sessions."

Space will not permit me to give a detailed account of the meeting, but suffice it to say that it was a success in every particular.

Fastening Foundation in Frames With Wedges.

Complaints have been made that fastening foundation in frames with wedges was not always reliable. The wedges sometimes loosen, and down comes the foundation. No one seemed to know just how to remedy this.

Stephen Anthony, a New Zealand subscriber, has a little son. This little son has a sheep-puppy. This boy put the sheep-puppy to bed one night in a shed where the father was nailing frames. The puppy didn't sleep all night, but turned loose on those frames. Among the things used for his midnight lunch was a bundle of wedges. They were short lengths the next morning.

Now it was found that by using these

short pieces the wedges did not fall out, so Mr. Anthony now cuts all his wedges in three pieces, using but two for each frame, starting about three-fourths of an inch from each end, and the trouble of falling foundation is done away with. Let us extend a vote of thanks to the puppy.

A Visit to The A. I. Root Co.

If the past poor season has been the means of dampening your enthusiasm, one of the best tonics that I can advise is to take a trip to the plant of the A. I. Root Co. When you see, as I did recently, one pile of 10,000,000 sections crated for shipment, about \$40,000 worth of lumber piled up under sheds where it has been curing, and which will all be used up in a few months in the manufacture of bee-supplies, you will realize that there is something after all in the bee-business, and will go home determined not to let one bad season put you on the shelf.

A walk through their offices, plant and grounds is certainly an inspiration. And, if you will keep your eyes open you will get some pointers, too. For instance, did you know of the "crack test" for beeswax? Take a cake of pure beeswax, break it in two, and you will notice that it is all flaky where the break occurs. This is a good test of its purity. Another thing I learned while there was that wax must "cure" before being made into foundation, in order that the latter will not be cloudy. Great piles of sheated wax was piled up awaiting a sufficient "curing" before being put through the Weed wax-machine. This "curing" insures its clearness after being made into foundation.

I certainly enjoyed my visit, and went away with added enthusiasm. I only wish space would permit me to tell you of all the things I saw, but the best plan is for you to go down and 'see for yourself.'

Marking Queens.

In the November REVIEW, page 317, was quoted a plea from a subscriber of the *British Bee Journal*, for some way of marking queens with some chemical which would allow of her easy detection on the comb, and yet in no way injure her. Already a REVIEW subscriber comes forward with the desired information.

The Johnston Milk Company, of Battle Creek, Mich., writes me that they have been purchasing queens from Dr. Bruennidis, of Switzerland, who breeds the pure German or brown race in the mountains of Switzerland, and who is considered an authority. All the queens received from the doctor have been marked. A careless glance at the frame that has the queen on it finds her majesty every time. In a letter to The Johnston Milk Co., the doctor says: "As to our marking-color, which for scientific observations is a *conditio sine qua non*, and which offers a number of advantages, especially if different colors are used, it is an easy thing. You take some clear spirit varnish (we suppose he means white shellac. J. M. Co.) and grind, successively adding to the varnish some color in fine powder, till you have a liquid of the consistency of syrup. The best colors are yellow (chrome-yellow), red, green (chrome-green), and white. Prove it at first with some drones."

As these queens live regularly to be four years old, certainly the marking can not injure them, and in such a case this marking should be very valuable. For instance, one could mark all the queens reared this year with one color. Next year he could use another color for next year's queens. By having four or five different colors, using one each year, you would have a complete record of the age of each queen by the color she carried on her back. No other record need be kept, and the system would be simplicity itself.

From the Hive to the Home. Larger Packages.

(Continued from page 342)

lieve the slogan should be for us, "From the hive to the home." That is where practically all of mine goes, as the result of advertising it. Another reason for larger packages is that one pound is not enough for a family to buy, considering the price compared with allied sweets.

The consumers, many of them, pay twenty-five cents for a one-pound bottle of honey that perhaps did not net the producer seven cents. That is foolishness from the producers standpoint.

I do not wish to be understood as saying that it is not honest and square to sell a bottle of honey for twenty-five cents, because it is, and cannot be sold for less when we consider the cost of the package, packing, freight, etc., but would it not be better for the bee-man to sell that same consumer two pounds for the same money? Now a man who buys ten pounds of nice clover honey for twelve cents a pound has got hold of a bargain in food, something he is going to like, and soon again he will send another order, a club order with his neighbor; that is the way it has worked out with me.

One must bear in mind one thing, name'ly, that the retail dealer is the hardest man in the world to sell to, and that the consumer is the easiest man to sell to.

It takes pure science to sell to grocers at a profit, but the ordinary bee-keeper, without much qualification as a salesman, can sell to the man who eats the honey, for all he has to do is to let it be known that he has it to sell and he can produce the goods, thus leaving the verdict to the consumer via the sense of taste.

Randolph, N. Y.

Program for the Michigan Convention.

As already announced, this convention will be held at Saginaw, December 13th and 14th. The first session will begin at 1 p. m. Wednesday 13th. The second session will begin at 7 p. m. On Thursday there will be two sessions, the first beginning at 8:30 a. m., and the second at 1 p. m.

The meetings will be held in the Auditorium, centrally located, and the hotel headquarters for the bee-keepers will be the Everett House, rates \$2.00 per day. Other hotels in easy access are, Wesley House, \$1.25; Bancroft and Vincent, \$2.50; Sherman House, European, rooms \$0.50 to \$0.75. There are several other hotels in easy access.

Program as follows:

1. Secretary-Treasurer's report.
2. Appointment of committees.
3. President's address, E. D. Townsend, Remus.
4. Adopting new constitution.
5. Questions of business.
6. Election of officers.
7. The foul brood fight in Michigan. Inspector G. E. Sanders, Lansing.
8. What shall be done to prevent the spread of European Foul Brood. Editor E. R. Root, Medina, Ohio.
9. Foul brood legislation. E. M. Hunt, Lansing.
10. What is the next best move for the Association to take. Jenner E. Morse, Saginaw.
11. How to run an apiary to best control the spread of foul brood. A. H. Guernsey, Ionia.
12. Out-apiaries. Ira D. Bartlett, East Jordan.
13. The future of Michigan bee-keeping. E. D. Townsend, Remus.
14. Production of comb honey. L. S. Griggs, Flint.
15. Production of extracted honey. Leon C. Wheeler, Barryton.
16. Honey exhibits at fairs. C. M. Nichols, Addison.

(Continued on page 351)

SELECTED ARTICLES

AND EDITORIAL COMMENTS

Baptizing Queens.

Wesley Foster tells us in *Gleanings in Bee Culture* of the following method of introducing queens:

Did you ever hear of baptism by sprinkling for bees, and baptism by immersion for the queens? Well, such are the rites administered by Mr. E. J. Wallinger when introducing queens. He uses a pan of water that has been warmed in the sun, and sprinkles the cluster of bees at the time the old queen is killed. Then he immerses the new queen, cage and all, in the water, and after a moment releases her among the sprinkled bees. By the time the bees in the hive are dry they all smell alike, and so are of one accord. Mr. Wallinger says this is the most satisfactory method of introduction he has yet found. He operates between 600 and 700 colonies of bees; is a farmer, assessor of Bent County, secretary of a new irrigation district to water 20,000 acres of land, and is secretary of the Bent Co. Melon-growers' Association.

Live Bee Demonstrations.

Are live bee demonstrations good things to encourage? Do they properly educate the public regarding the bee industry? Read what Miss Ethel Robson says in the *Canadian Bee Journal*:

The O. A. C. had the exhibition of handling live bees again on the grounds, with some of the students interested in apiculture in charge. My visit was paid too late in the day to see a demonstration. Bee-keepers are not altogether favorable in their comments on this method of bringing bee-keeping before the public, the fear being that making a popular side-show of bees may have a tendency to make bee-keeping appear mere child's play, and so help to swell the ranks of incompetent bee-keepers. Bee-keepers welcome all capable men to their ranks, but they do fear the men whose

bees, being only a side line, will usually have to take chances, and if disease should strike them, become a menace to the whole community.

Renewal of Old Combs.

L. S. Cranshaw tells us in the *British Bee Journal* of a simple little tin marker which can be used for marking combs while in use in the apiary. The device is described as follows:

If at any time during summer manipulation I discover a comb which needs replacement, I mark it. For this purpose I use small tin clips. These I make from pieces $1\frac{1}{2}$ in. long by about $\frac{3}{4}$ in. wide. When the ends are bent up the result is a channel-shaped clip [diagram], which exactly fits the top bar. If a trifle slack, the ends may be closed a little. These marked combs are selected by preference for nuclei, or driven bees, or similar purposes. They thus automatically collect themselves, and may be disposed of in due course. If a stock be wintered upon them, a number will be free the following spring. The method is not very different or original, but may have some advantages.

False Impressions Concerning American Methods.

It seems that American methods are not clearly understood "across the way." Today I was reading in one of the foreign journals about American "junk" honey. What do you think of that, Friend Scholl, having your delicious "bulk comb honey" referred to as "junk" honey? I thought it was a typographical error until I saw it repeated in the same article.

Along this line we have the following from the *British Bee Journal*, but we should be pleased to know what

American uses "quarter sized sections" for the purpose of producing samples to give away, or for any other reason for that matter unless it would be for show purposes:

Mr. Reid, in speaking of the attractiveness of honey properly put up, said the Japanese excel us in this respect, and referred to a jar which was shown at a previous conversazione. The Americans go to other extremes and sell "chunk" honey, and if they get any imperfect sections they cut them up and put them into bottles, with the pieces of comb floating about. A good plan was to give away samples as an advertisement. Small sections are produced in America, one quarter the size of the ordinary one for this purpose.

The Outside Wintering of Bees.

Under the above heading Mr. R. F. Holterman tells in *Gleanings in Bee Culture*, some of the reasons why he winters his bees outside instead of in his \$1,000 cellar. Naturally any reasons which would make an extensive bee-keeper abandon a special repository which had cost him \$1,000, and take up outdoor wintering instead, are interesting. We read:

When wintering in the above-named cellar my method was to remove the bees from the cellar and place them on stands. They were next taken to clover pasture, sometimes a distance of thirty miles. Next they were taken to buckwheat, and finally returned to the bee-yard in connection with the cellar.

By this method the hives and bees were unprotected during the spring, also in the autumn, until placed in winter quarters about Nov. 20. I was also compelled to be on hand when the cold weather began to moderate in spring, and there was always a good deal of anxiety as to the best time to set out, sometimes to find that, owing to conditions of weather, many bees had perished in their first flight, and others had drifted to the disadvantage of the weaker stocks.

Again, I had to be on hand in the autumn until about Nov. 20; and even after that, the outside doors required too intelligent and expert judgment to regulate to trust to inexperienced

hands. The bees were thus often unprotected, which was injurious to them, not only in the spring, but during cold damp days and nights in the fall of the year. In the spring, with low temperature, I have found the bees quiet and inactive, so that practically no enlargement of the brood-space was taking place when bees packed offered a strong contrast in their interior activity.

Superseding of Newly Introduced Queens.

In a talk with Geo. B. Howe at the Toronto Convention, I learned that he never subjected a queen to the mercy of the mails until he had reduced her egg laying. This he did, if I remember correctly, by putting the queen in neolus for a short time before mailing. This no doubt has much to do with successful introduction, and I notice that Arthur C. Miller holds the same view as is evidenced by what he says in *Gleanings in Bee Culture* in the following:

How very frequently the complaint is heard that the bees superseded some choice queen recently introduced! The trouble is generally laid to harm to the queen caused by mailing, or to some injury such as a lost leg, etc. In all these cases, with rarely an exception, the queens were introduced in cages and released by the eat-out plan. Man meddled and muddled as usual. Dequeening and immediate direct introduction of the new queen is rarely followed by attempted superseding, even though the queen came from a distance. If, however, the queen was taken in the full tide of her laying, and caged with the ordinary quota of attendants, she may have received such a shock to her system that she will never again be good.

When the bees start to supersede a recently introduced queen, the trouble may be stopped by the following procedure: Remove the started cells, also two combs of capped and emerging brood, and in their place put from another colony two combs of hatching eggs and very young larvae. That is all.

If the attempts at superseding are resumed it can be stated with certainty that the queen is really failing. There

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Program for the Michigan Convention.

(Continued from page 346)

17. Bee-keeping for ladies. Mrs. S. Wilbur Frey, Sand Lake.

18. Resolutions.

19. Question box.

Prizes will be offered for the best 10 sections comb honey, the best 10 jars of extracted honey, the 3 best sections of white comb honey, and the cleanest sample of 10 pounds of beeswax.

E. B. TYRRELL, Sec.

New National Constitution Adopted.

Just in time to crowd the item in here, I learn that the new constitution for the National Association has been adopted by the members. The nominees for office were also all elected, making the officers for 1912 as follows: President, Geo. W. York; Vice-President, Morley Pettit; Secretary, E. B. Tyrrell; Treasurer-General Manager, N. E. France; Directors, E. D. Townsend, Wesley Foster, F. Wilcox, J. E. Crane, and J. M. Buchanan.

Honey Quotations

The following rules for grading honey were adopted by the North American Bee-Keepers' Association, at the Washington meeting, and, so far as possible, quotations are made according to these rules:

FANCY—All sections to be well filled; combs straight, of even thickness, and firmly attached to all four sides; both wood and comb unsoiled by travel-stain or otherwise; all the cells sealed except the row of cells next the wood.

No. 1.—All sections well filled, but combs uneven or crooked, detached at the bottom, or with but few cells unsealed; both wood and comb unsoiled by travel-stain or otherwise.

In addition to this the honey is to be classified according to color, using the terms white, amber and dark. That is, there will be "fancy white," "No. 1, dark," etc.

The prices given in the following quotations are those at which the dealers sell to the grocers. From these prices must be deducted freight, cartage and commission—the balance being sent to the shipper. Commission is ten per cent; except that a few dealers charge only five per cent. when a shipment sells for as much as one hundred dollars.

BOSTON—Fancy white comb honey 17c to 18c. Light amber 16c. Amber 15c. Fancy white extracted 10c to 11c. Light amber and amber extracted 8c to 9c. Wax 30c.

Nov. 24th. **BLAKE LEE CO.,**
4 Chatham Row.

CHICAGO—The comb honey market has been well supplied by quite heavy receipts during the past month, and there is an easement in price on everything except strictly fancy. Sales are made for A No. 1 to fancy at 17 to 18c per lb., other grades at from 1c to 3c less. Amber grades are slow of sale at from 12 to 15c per lb. Extracted white 8c to 9c, amber 7c to 8c per lb. Beeswax steady at 32c per lb. if clean and of good color.

Nov. 23. **R. A. BURNETT & CO.,**
173 W. South Water St.

DENVER—Our market is heavier stocked with extracted honey than comb. Demand for both is fair only. We are quoting our local market in a jobbing way as follows: No. 1 White Comb, per case of 24 sections, \$3.15; No. 1 Light Amber, \$2.90; No. 2, \$2.70. White Extracted Honey per pound 9c; Light Amber 8c; Amber and strained 6½-7½c. We pay 26c in cash and 28c in trade for clean yellow beeswax delivered here.

Yours very truly,
THE COLORADO HONEY
PRODUCERS' ASSN.
Nov. 24. **F. Randefuss, Manager.**

CINCINNATI—The market on comb honey is firm and is selling in jobbing lots according to quantity from \$3.65 to \$3.75 per case. There is no demand for off grades or amber comb honey. Extracted fair demand, light amber 8c to 8½c in 60-lb. cans. White honey 10c and 11c. Beeswax in fair demand, selling at \$33.00 per 100 lbs. The above are our selling prices, not what we are paying.

Nov. 17. **C. H. W. WEBER & CO.**

KANSAS CITY—The supply of both Comb and Extracted honey is not large; demand fair. We quote No. 1 White Comb, 24 section cases, \$3.25-\$3.35; No. 2 White Comb, 24 section cases, \$3.00; No. 1 Amber, 24 section cases, \$3.00-\$3.25; No. 2 Amber, 24 section cases, \$2.75-\$3.00; Extracted White per pound, 8½c-9c; Extracted Amber per pound, 7c-8c; Beeswax per pound, 25c-28c.

Nov. 24. **C. C. CLEMONS PRODUCE CO.**

CINCINNATI—There is considerable honey coming in. Strictly fancy comb honey is selling from 16½c to 18c. Amber Comb Honey is a detriment to the honey business, and we discourage its sale for the reason buyers buy it just because of price and are unconscious of the great harm they are doing to the trade in general. Extracted honey is plentiful, while the price holds up pretty well, there is a world of it to be bought. We are selling amber extracted honey from 6c to 7½c according to the quality and quantity purchased, and for strictly fancy water white fancy table honey, 10c and 11c per pound. We are paying from 28c to 30c per pound for bright yellow beeswax delivered here.

THE FRED W. MUTH CO.,
"The Busy Bee Men."
Oct. 21. 31 Walnut St.

TOLEDO—There is not much change since our last quotations, except that the demand for honey both comb and extracts has increased, and will as the season advances, as the fruit is about gone, and honey will sell well until about Dec. 1st, but the shipments are coming forward more freely and are equal to the demand, owing to the prevailing prices, sales are made in a retail way as follows: No. 1 to Fancy White 18c, very little to be had; Light Amber, 15c to 16c; No. 2 grades of White bring from 16c to 17c per lb.; no demand for dark grades. Beeswax is steady at from 30 to 33 cents. Extracted is in good demand and white honey sells at 10c per lb. Amber and off grades sell at from 7½ to 8½c.

Oct. 21. **S. J. GRIGGS & CO.**

NEW YORK—Comb Honey is in good demand for all grades. On account of the short crop, receipts are rather light and hardly sufficient to fill demands. No. 1 and fancy white find ready sale at from 15c to 17c, according to quality and style of package; No. 2 white, 14c; mixed and amber, 13c; buckwheat at from 10c to 12c, according to quality.

Extracted, fair demand. Early in the season reports from California and the northwest, indicated a short crop. These reports, however, have been misleading, as it is now generally conceded that the crop in California, as well as in the far West, was much larger than the reports given out indicated, consequently prices show a downward tendency, and are likely to go still lower. On account of the high prices asked in the beginning of the season, some large concerns have cut honey out altogether, while others have been able to secure their supply in foreign honey, at considerably lower figures. Extracted, from the above mentioned points is now being offered freely, and it is evident that there are large quantities yet to be disposed of. We quote: California white sage, 9c to 9½c; light amber at from 8c to 8½c; amber at from 7c to 7½c; alfalfa at from 7½c to 8c; white clover and linden at from 9c to 9½c; buckwheat and dark at from 7c to 7½c, possibly 8c.

Nov. 23. **HILDRETH & SEGELKEN.**

Classified Department.

Notices will be inserted in this department at ten cents per line. Minimum charge will be twenty-five cents. Copy should be sent early, and may be for anything the bee-keeper has for sale or wants to buy. Be sure and say you want your advertisement in this department.

FOR SALE

FOR SALE.—Water white and light-amber alfalfa and light-amber fall honey, put up in any size packages. First class.

DADANT & SONS, Hamilton, Ill.

FOR SALE.—Empty second-hand 60-lb. cans, as good as new, two cans to a case, at 25 cts. per case.

C. H. W. WEBER & Co.,
Cincinnati, O.

APRIL-HATCHED INDIAN RUNNER DUCKS, fawn and white; \$2.00 each; \$3.50 a pair; \$5.00 per trio. White-egg strain.

KENT JENNINGS, Mt. Gilead, Ohio.

RHODE ISLAND RED COCKERELS that are Red. Have spent three years line breeding. These are the first I have offered for sale.

Dr. R. P. WIXOM,
273 Euclid Ave. East, Detroit, Mich.

FREE FOR STAMP.—"Breeding a Better Bee." GERMANIA APIARIES, Germania, Ark.

FOUNTAIN PENS from \$2.00 to \$3.75. If not satisfactory you may return the pen and I will return the money. E. F. PATTERSON, Box 96, Montrose, Col.

"EGGMAKERS"—S. C. Brown Leghorns. State wide reputation. Cockerels \$2.00, \$3.00 and \$5.00 each by return express. WM. J. COOPER, Mt. Pleasant, Rt. 8, Mich.

FOR SALE.—Nine choice R. I. Cockerels, pure breeds at \$1.50 each to close out. Also fine Hubbard squash at \$1.50 per 100 lbs. EDW. DEDDOUT, Baldwinsville, N. Y.

FOR SALE.—Quantity 10 frame hives, fixtures, magazines, etc. EDWIN EWELL, Litchfield, Mich.

FOR SALE.—175 colonies of bees in 8-frame hives, run for comb honey, with 500 comb-honey supers, and about 35 full-depth hive-bodies filled with honey for next season's feeding. I am close to the Nevada State-line. No foul brood in this valley. H. CHRISTENSEN, Coleville, Mono Co., Cal.

GOLDEN ITALIAN QUEENS that produce golden bees, the brightest kind. Gentle, and as good honey gatherers as can be found. Each \$1, six \$5; tested \$2.

J. B. BROCKWELL, Barnetts, Va.

FOR SALE.—Absolutely pure California sage extracted honey; several cans white and light amber, in 60-lb. tins, two tins to a case. Write us for samples and prices.

Rather Bros., Managers,
HEMET VALLEY BEE-KEEPERS' ASSOCIATION,
Hemet, Cal.

FOR SALE.—Amber and buckwheat honey in new 60-lb. tin cans. C. J. BALDRIDGE, Homestead Farm, Kendaia, N. Y.

RINGLET BARRED PLYMOUTH ROCKS.—Fine, healthy, well barred cockerels and pullets at \$2.00 each. Prize winners at our County Fair. R. J. SCHLONEGER, Pigeon, Mich.

FOR SALE.—Clover, basswood, alfalfa, sage or light amber fall honey. First-class stock put up in any sized cans. Send for price list. M. V. FACEY, Preston, Fillmore Co., Minn.

FOR SALE.—New crop of alfalfa seed; 4 pounds by mail, prepaid, \$1.10; 50 to 100 lbs., 14½ cts. per lb. Sacks, 25 cts. extra.

R. L. SNODGRASS, Rt. 4, Augusta, Kansas.

LIGHT-AMBER extracted honey, principally from cotton bloom, in new 60-lb. cans. Price 8½ cts. per lb. f. o. b. Bogart, cash with order. Samples free. JOHN W. CASH, Bogart, Ga.

GOLDEN QUEENS.—Very gentle, very hardy, and great surplus gatherers. Untested, five and six band, \$1.00; select tested, \$3.00; also nuclei and full colonies. Send for circular and price list to GEO. M. STEELE, 30 S. 40th St., Philadelphia, Pa.

LILLIE FARMSTEAD POULTRY.—B. P. Rocks, R. I. Reds, and S. C. W. Leghorn eggs for sale. 15 for \$1; 26 for \$1.50; 50 for \$2.50. COLON C. LILLIE, Coopersville, Mich.

SILVER, GOLDEN AND WHITE WYANDOTTS.—Choice breeding stock at reasonable prices. Catalogue free. BROWNING'S WYANDOTT FARM, Rt. 33, Portland, Mich.

ASBESTOS INSOLES.—Do you want to keep your feet warm? Try a pair. New treatment for tired and aching feet. State size. Two for 25c. HAHN, 254 W. 15th St., New York, N. Y.

200 TESTED RED CLOVER AND GOLDEN YOUNG QUEENS; safe arrival guaranteed. 50 cents each. EVANSVILLE BEE & HONEY Co.,
Evansville, Ind.

WANTED

WANTED.—Comb, extracted honey, and beeswax.
R. A. BURNETT & Co.,
173 W. S. Water St., Chicago.

WANTED.—To buy amber and dark extracted honey; to sell, second-hand 60-lb. cans.
A. G. WOODMAN Co., Grand Rapids, Mich.

WANTED.—To exchange Root bee-supplies either for money or honey. December cash discount, 4 per cent. Catalog free.
E. W. PEIRCE, Zanesville, O.

WANTED.—White honey, both comb and extracted. Write us before disposing of your crop. HILDRETH & SEGELKEN, 265 Greenwich St., New York.

WANTED.—100 to 300 colonies bees to work on shares the coming season. Must be free from foul brood and in good hives. 33 years' experience. A. D. D. WOOD, Box 61, Lansing, Mich.

SELECTED ARTICLES.

(Continued from page 348)

is a rare exception when the bees continue attempts at superseding after the transposition of brood when the queen is really good; so if the queen is particularly valuable it is well to remove started cells again and change another comb of capped brood for one of unsealed larvæ. By combs of capped brood or unsealed larvæ is meant where the greater part of the continued young are of the character specified. The foregoing procedure is based on fundamental laws of bee life.

Big Money in Bee Raising Out West —Government Starts a Boom for Honey-Industry.

Under the above double heading, the *Detroit News* gave the following item, space in a recent issue. While we may not all be willing to accept the "Profits of about 150 per cent a year" sentence, we should be pleased with the publicity given the industry by a paper of such wide circulation. It should give us encouragement to give items of general or local interest to the press concerning bee-keeping, as it all tends towards that "general advertising" we have talked about so much. The item was as follows:

WASHINGTON, Nov. 9.—"Young man, go west and make honey," is the form to which Uncle Sam has changed Horace Greeley's advice.

Profits of about 150 per cent a year can be made in the bee industry on some of the government reclamation projects of the west, according to officials of the reclamation service.

"The average price of bees in the west," said C. J. Blanchard, statistician of the service today, "is probably about \$5 a hive. The manager of a large

apiary on one of the irrigated tracts, gives the average production of his hives at 76 pounds of surplus honey per annum. At 10 cents a pound the returns would be \$7.60. In addition to that, the increase averages 100 per cent a year, doubling the original investment and making a total of 150 per cent profit each year on the original investment.

"Reports indicate that the quality of the honey being raised on some of our government projects is most excellent," continued Mr. Blanchard. "Many bee farmers have located in fruit sections, and the combination is found to be mutually advantageous. The trees furnish an abundance of honey during the blossoming period, and orchard men state that the economic importance of the bee, from the standpoint of its value in the pollenization of fruit, cannot be overestimated."

Try Our Liner Columns for Results

American Butter & Cheese Co.,

31-33 Griswold St., Detroit, Mich.

Always in the market for choice comb honey. Write us.

WANTED WHITE HONEY

Both comb and extracted. Write us before disposing of your crop.

HILDRETH & SEGELKEN
265-267 Greenwich St.
New York, N. Y.

RIGHT NOW IS A GOOD TIME TO FIGURE

Many bee-keepers have found it profitable to figure out in early winter what bee supplies they would want next season. After doing this they would then send the list to supply men for prices. Naturally we can give you better prices now than we can later in the season. Let us help you figure it out. Send us your list of supplies wanted.

M. H. HUNT & SON, Lansing, Mich.

I want every one of my present subscribers to remain with me for 1912. It will be the best encouragement you can give me as a "new editor", and in return I promise you some decided improvements in "our paper". During the past six months I have been "feeling my way", but now I have my "coat off and sleeves rolled up" for progress. To begin with, the January number will have—but wait and see what it will have. In the meantime send in your renewal, and make a Christmas present of a years subscription to that friend.



GEO. B. HOWE,
Black River, N. Y.

Mr. Howe needs no introduction to Review readers. His success in breeding a strain of honey-gatherers is too well known. It is not unusual for him to get 200 pounds of comb honey from a single colony. Learning how to breed up this strain cost him much time and money, and now he will tell in detail, in a series of articles to appear in the Review in the spring months of 1912, just how he does it. You can't afford to miss this series, and you may, unless you renew right now. I pledge you my word of honor that if you will read the Review for 1912, you will feel well repaid for the Dollar invested.

E. B. TYRRELL.

Carniolan Alpine Queens—Gray Workers

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5 x6 x2	1 B W
4 $\frac{1}{2}$ x5 x1-15/16	2 B W
5 $\frac{1}{4}$ x6 $\frac{1}{4}$ x1 $\frac{7}{8}$	2 B W
5 x5 $\frac{1}{2}$ x2	2 B W
4 $\frac{1}{4}$ x5 $\frac{1}{4}$ x1-15/32	2 B W
4 $\frac{1}{2}$ x4 $\frac{1}{2}$ x1 $\frac{3}{4}$	2 B W
4 $\frac{1}{4}$ x4 $\frac{1}{4}$ x1-50/53	2 B W
4 $\frac{1}{4}$ x4 $\frac{1}{4}$ x1 $\frac{3}{4}$	2 B W
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